Massachusetts Department of Public Health

**Health Survey Program**
**Center for Health Information, Statistics, Research, and Evaluation**

# A Profile of Health Among Massachusetts Adults, 2005

Results from the Behavioral Risk Factor Surveillance System

*Mitt Romney, Governor*
*Kerry Healey, Lieutenant Governor*
*Timothy R. Murphy, Secretary of Health and Human Services*
*Paul J. Cote, Jr., Commissioner of Public Health*

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# ACKNOWLEDGEMENTS

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We wish to express our gratitude to the residents of Massachusetts who participated in this survey, and to ORC Macro, Inc. and the dedicated interviewers who helped make this survey possible.

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# NEW IN THIS REPORT

We have made a number of changes in this year's report. Starting this year, only crude percentages are presented in the body of the report. Age adjusted percentages for selected indicators are included in the Appendix.

In the charts comparing Massachusetts data over time for variables that have been measured for 5 years or more, we provide US median data over time if available. This allows comparisons of US and Massachusetts data.

Join point regression was used for the first time to analyze changes in trends and annual percentage changes were calculated to quantify the magnitude of change.

# Highlights

The highlights from the 2005 Massachusetts Behavioral Risk Factor Surveillance System report are presented below. For the details on each indicator, including definitions and additional variations in subgroup populations, please refer to the corresponding sections of this report.

**Overall Health Status**

- 13% of Massachusetts adults surveyed reported their health was either fair or poor.

**Quality of Life**

- 8% of Massachusetts adults surveyed reported 15 or more days of feeling sad, blue or depressed in the past 30 days.
- 9% of Massachusetts adults reported 15 or more days of poor physical health in the past month.
- 9% of Massachusetts adults reported that they had 15 or more days of poor mental health in the past 30 days.

**Insurance Status**

- 9% of Massachusetts adults (ages 18-64) surveyed reported being uninsured at the time of the survey.

**Health Care Access**

- 87% of Massachusetts adults surveyed reported that they had a personal health care provider.
- 9% of Massachusetts adults reported that they had not seen a doctor at some point in the past year due to cost.

**Tobacco Use**

- 18% of Massachusetts adults surveyed reported that they were current smokers.
- 2% of Massachusetts adults were heavy smokers (smoking more than 20 cigarettes per day).

**Smoking Cessation**

- 56% of Massachusetts smokers surveyed had stopped smoking for one day or longer in the past 12 months because they were trying to quit.
- 33% of Massachusetts smokers were planning to quit in the next 30 days.

**Environmental Tobacco Smoke**

- 78% of Massachusetts adults surveyed reported living in a household where smoking was not allowed anywhere.
- 45% of Massachusetts adults were exposed to environmental tobacco smoke in the past 7 days.

**Alcohol Use**

- 16% of Massachusetts adults surveyed reported binge drinking at some point in the past month.
- 6% of Massachusetts adults surveyed reported heavy drinking in the past month.

**Overweight and Obesity**

- 56% of Massachusetts adults surveyed were overweight or obese based on their reported height and weight (BMI ≥ 25).
- 21% of Massachusetts adults were obese based on their reported height and weight (BMI ≥ 30).

**Physical Activity**

- 77% of Massachusetts adults surveyed reported some form of leisure time physical activity over the past month.
- 53% of Massachusetts adults reported regular physical activity in the past month.

**Fruit and Vegetable Consumption**

- 29% of Massachusetts adults reported consuming five or more servings of fruit and vegetables per day.

**Cholesterol Awareness**

- 79% of Massachusetts adults reported that they had had their cholesterol checked in the past 5 years.
- 36% of adults who had had their cholesterol checked were told by a doctor, nurse, or other health professional that their cholesterol was high.

**Hypertension Awareness**

- 25% of Massachusetts adults reported that they had been told by a doctor, nurse, or other health professional that they have high blood pressure.
- 75% of those with high blood pressure reported taking medication for that condition.

**Flu Vaccine and Pneumonia Vaccine**

- 31% of adults ages 50-64 years reported having a flu vaccine in the past year.
- 65% of adults age 65 and older reported having a flu vaccine in the past year.
- 65% of adults age 65 and older reported ever having a pneumonia vaccination.

**Diabetes**

- 6% of Massachusetts adults surveyed reported that they had ever been told by a doctor that they had diabetes.

**Asthma**

- 14% of Massachusetts adults surveyed reported that they had ever been told by a doctor that they had asthma.
- 10% of Massachusetts adults reported that they currently have asthma.

**Arthritis**

- 26% of Massachusetts adults reported that they had been told by a doctor or other health professional that they had arthritis.
- 9% of Massachusetts adults reported that they had limitations in their usual activities because of arthritis.

**Heart Disease and Stroke**

- 9% of Massachusetts adults ages 35 and older reported that they had ever been told by a doctor, nurse, or other health professional that they had heart disease.
- 3% of Massachusetts adults ages 35 and older reported that they had ever been told by a doctor, nurse, or other health professional that they had had a stroke.

**Disability**

- 20% of Massachusetts adults surveyed reported having a disability.
- 7% of Massachusetts adults reported that they had a disability that caused them to need help with routine activities.

**Colorectal Cancer Screening**

- 30% of adults ages 50 and older reported ever having had a blood stool test using a home kit to determine if their stool contained blood.
- 59% of adults ages 50 and older reported having had a sigmoidoscopy or colonoscopy in the past five years.

**Breast Cancer Screening**

- 84% of women ages 40 and older reported having a mammogram in the past two years.

**HIV Testing**

- 41% of adults ages 18-64 reported ever having been tested for HIV.
- 9% of adults ages 18-64 reported that they had been tested for HIV in the past year.

**Illicit Drug Use**

- 57% of Massachusetts adults surveyed reported ever having used an illicit drug.
- 8% of Massachusetts adults reported having used an illicit drug in the past 30 days.

**Sexual Violence**

- Among Massachusetts men, 6% reported experiencing sexual violence at some point in their lifetime.
- Among Massachusetts women, 17% reported having experienced sexual violence at some point in their lifetime.

**Intimate Partner Violence**

- Among Massachusetts men, 14% reported that they had ever experienced intimate partner violence.
- Among Massachusetts women, 22% reported that they had ever experienced intimate partner violence.

# INTRODUCTION

The Behavioral Risk Factor Surveillance System (BRFSS) is a continuous, random–digit–dial, telephone survey of adults ages 18 and older and is conducted in all states as a collaboration between the federal Centers for Disease Control and Prevention (CDC) and state departments of health. The survey has been in the field in Massachusetts since 1986. The BRFSS collects data on a variety of health risk factors, preventive behaviors, chronic conditions, and emerging public health issues. The information obtained in this survey assists in identifying the need for health interventions, monitoring the effectiveness of existing interventions and prevention programs, developing health policy and legislation, and measuring progress toward attaining state and national health objectives.

Each year, the BRFSS includes a core set of questions developed by the CDC. In 2005, these questions addressed health status, health care access and utilization, exercise, fruit and vegetable consumption, asthma, diabetes, immunizations, tobacco use, alcohol consumption, HIV/AIDS, and other selected public health topics.

In addition to the core CDC questions, the Massachusetts BRFSS added a number of topics to the surveillance instrument including environmental tobacco exposure, disability and quality of life, breast and colorectal cancer screening, illicit drug use, and other selected topics.

Interviews were administered in the respondents' preferred language, with a choice of English, Spanish, or Portuguese. Interviews were conducted with 62% of those determined to be eligible to participate in the survey. In 2005, **8,906** interviews were conducted among Massachusetts adults.

## ABOUT THIS REPORT

This report summarizes selected results from the 2005 Massachusetts BRFSS. First, a description of survey questions used for key variables is provided. In addition, overall percentage estimates of these variables are presented, along with key findings of interest. Where possible, figures comparing 2005 results to previous years' data are provided for variables that have been measured for five or more years. The US median data for all participating states and territories for the same variables are presented to compare Massachusetts and national data.

Tables detailing the overall estimates and estimates by demographic and socioeconomic characteristics (gender, age, race-ethnicity, education, annual household income, and Massachusetts health service regions) are provided. In the Appendix of the report, tables detailing age-adjusted percentages and their 95% confidence intervals are presented.

A comparison of 2005 Massachusetts results to national data and Healthy People 2010 Objectives is also provided in the Appendix.

All percentages in this report are weighted (see definition in next section) to the total Massachusetts population in 2005 in order to reflect both the probability that an individual is selected to participate in the survey and the differential participation by sex, age, and race-ethnicity. There may be slight differences in estimates between this report and previous publications due to different sample weighting methods.

Readers should be aware that all data collected by the BRFSS are based on self-reported information from respondents. Self-reported data may be subject to error for several reasons: an individual may have difficulty remembering events that occurred a long time ago or the frequency of certain

behaviors; some respondents may over-report socially desirable behaviors or under-report behaviors they perceive to be less acceptable; and respondents may also report certain risks, behaviors and perceptions differently due to their respective cultural and linguistic backgrounds. Additionally, because the BRFSS surveys a randomly selected sample of Massachusetts adults, these results may differ from another random sample to some extent simply due to chance.

## TERMS, DEFINITIONS AND STATISTICAL METHODOLOGY USED IN THIS REPORT

The BRFSS data are **weighted** to take into account the differences in probabilities of selection due to the telephone number, the number of adults in a household, and the number of telephones in a household. Adjustments are also made to account for the non-response and non-coverage of households without telephones. All the weighting factors are multiplied together to get the final weight for each respondent so that the weighted BRFSS data represents the adult population of Massachusetts.

The **crude percentage** is the weighted proportion of respondents in a particular category. When percentages are reported in the text of this report, they are referring to crude percentages. The crude percentage of respondents used in this report reflects the burden of certain health status indicator in a specific group of the population e.g. age group, gender etc.

The **age-adjusted percentage** is a weighted average of the age-specific proportions. The projected 2000 US population was used as a standard for the calculation. These estimates are presented in tables in the Appendix of this report. The age-adjusted percentage is a single, calculated number. Age-adjustment is done in order to be able to compare population subgroups with potentially different age structures (e.g., Hispanic vs. White non-Hispanic). The reader should exercise caution using age adjusted percentages for the comparison of survey data subgroups. While the estimates have been adjusted by age, other factors like gender, income, or education and their possible correlation may also have an impact on the results of subgroup comparisons.

**The US median** is calculated by rank ordering the estimates from all participating states, the District of Columbia, and territories for each respective indicator from smallest to largest value when available. The middle value is then chosen (if the number of values is odd) or calculated as the average of the two middle values (if the number of values is even). The median then represents a value for which half of the states have higher estimates and half of the states have lower estimates.

**The 95% confidence interval (95% CI)** is a range of values determined by the degree of variability of the data within which the true value is likely to lie. The confidence interval indicates the precision of a calculation; the wider the interval the less precision in the estimate. The 95% confidence intervals used in this report for crude and age adjusted percentages are the indicators of reliability (or stability) of the estimate. Smaller population subgroups or smaller numbers of respondents yield less precise estimates.

**Suppression of the presented estimates**: estimates and their 95% confidence intervals are not presented in the tables if the underlying sample size is less than 50 respondents (insufficient data).

**Statistical significance** (at the 95% probability level) was considered as a basis when we used the terms “more likely”, “less likely”, “about the same“, “increase” or “decrease.” The percentages for respective subgroups are presented when a difference is statistically significant, or not statistically significant but worth noting due to the potential public health impact.

The difference between two percentages is statistically significant (with 95% probability) if the 95% confidence intervals surrounding these two percentages do not overlap. The difference may still be statistically significant if the confidence intervals for two percentages are minimally overlapping. In these cases an additional statistical test was used to determine whether the percentages were different (with 95% probability).[1] We use the terms "**more likely**" or "**less likely**" when comparing proportions.

**Annual Percent Change (APC)** shows how fast or slow a percentage has increased or decreased over the observed period of time. Only statistically significant **APC**s are referred to in the text of this report. The **APC** is a measure used for the analysis of trends over time. This estimation assumes a linear change in the proportion of values over a certain time period. A positive APC corresponds to an increasing trend, while a negative APC corresponds to a decreasing trend. All APCs calculated in this report were statistically tested (95% probability level) against the "null hypothesis"- the proportion value is neither increasing nor decreasing over time. The linear approximation for the trend may not be accurate for longer periods of time (over 5 years) because the trend may change its direction over time. More detailed trend analysis is needed to determine these possible changes.

**Join point regression** was used to calculate the number and location (in time) of points where trends change direction (join points).[2] The join point regression model describes the trend as a sequence of linear segments between corresponding join points, so that each segment has an associated **APC,** which is tested for its statistical significance.[3,4]

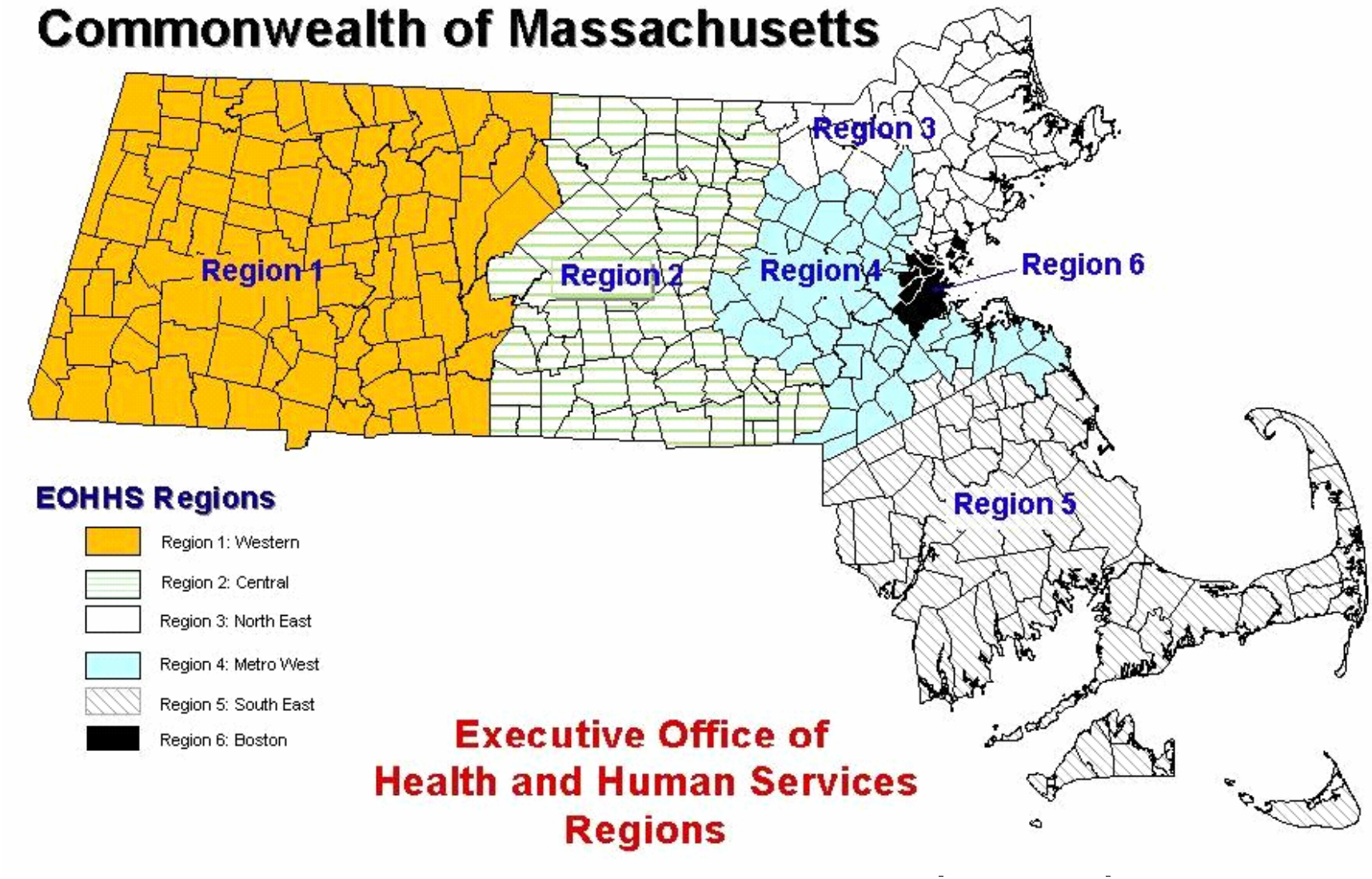
**Race-ethnicity categories** in this report include White, Black, Hispanic, and Asian. When referring to White, Black, or Asian, these categories include only non-Hispanic respondents. All respondents reporting Hispanic ethnicity are included in the Hispanic category.

***Healthy People 2010 Objectives:*** *Healthy People 2010: National Health Promotion and Disease Prevention Objectives* is a national agenda that aims to significantly improve the health of Americans in the decade preceding the year 2010. Developed through an extensive governmental, professional, and public national process, Healthy People 2010 defined two broad national goals: to increase quality and years of healthy life and to eliminate health disparities. These goals were supported by 476 specific objectives that set priorities for public health during the first decade of the 2000's. The objectives were organized into 28 priority areas and for each objective, a numeric national target for the year 2010 was set. For each health status indicator in this report that has a corresponding Healthy People 2010 Objective, the year 2010 target is shown in the summary table at the end of the document.

[1] Morel, G. Logistic Regression under Complex Survey Designs *Survey Methodology* 1989;15:203-223.
[2] Joint point Regression Program: Version 3.0. National Cancer Institute, Bethesda, MD, September 2003.
[3] Kim HJ, Fay MP, Feuer EJ, and Midthune DN. Permutation Tests for Jointpoint Regression with Applications to Cancer Rates. *Statistics in Medicine* 2000;19:335-351.
[4] Lerman, PM. Fitting Segmented Regression Models by Grid Search. *Applied Statistics* 1980;29:77-84.

| DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS<br>MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2005 | | |
|---|---|---|
| | UNWEIGHTED SAMPLE SIZE<br>N | WEIGHTED PERCENT<br>%** |
| OVERALL | 8,906 | 100.0 |
| GENDER | | |
| MALE | 3,412 | 47.5 |
| FEMALE | 5,494 | 52.5 |
| AGE GROUP | | |
| 18–24 | 407 | 12.4 |
| 25–34 | 1,207 | 17.6 |
| 35–44 | 1,789 | 20.6 |
| 45–54 | 1,871 | 18.1 |
| 55–64 | 1,567 | 13.7 |
| 65–74 | 978 | 8.5 |
| 75 AND OLDER | 912 | 9.2 |
| RACE-ETHNICITY* | | |
| WHITE | 7,230 | 83.2 |
| BLACK | 412 | 3.7 |
| HISPANIC | 833 | 8.8 |
| ASIAN | 171 | 2.8 |
| EDUCATION | | |
| < HIGH SCHOOL | 910 | 8.3 |
| HIGH SCHOOL | 2,386 | 25.7 |
| COLLEGE 1–3 YRS | 1,954 | 22.8 |
| COLLEGE 4+ YRS | 3,627 | 43.2 |
| HOUSEHOLD INCOME | | |
| <$25,000 | 2,075 | 21.0 |
| $25,000–34,999 | 808 | 10.3 |
| $35,000–49,999 | 1,092 | 13.8 |
| $50,000–74,999 | 1,288 | 17.9 |
| $75,000+ | 2,281 | 36.9 |
| REGION | | |
| I–WESTERN | 1,229 | 14.1 |
| II–CENTRAL | 1,240 | 15.0 |
| III–NORTH EAST | 2,011 | 18.6 |
| IV–METRO WEST | 1,299 | 22.3 |
| V–SOUTH EAST | 2,106 | 20.4 |
| VI–BOSTON | 1,021 | 9.6 |

* White, Black and Asian categories refer to non-Hispanic
** See BRFSS methodology in "Terms, Definitions and Methodology Used in this Report"


Commonwealth of Massachusetts
Region 1
Region 2
Region 3
Region 4
Region 5
Region 6
EOHHS Regions
Region 1: Western
Region 2: Central
Region 3: North East
Region 4: Metro West
Region 5: South East
Region 6: Boston
Executive Office of
Health and Human Services
Regions

# SECTION 1: OVERALL HEALTH MEASURES

## Section 1.1: Overall Health Status

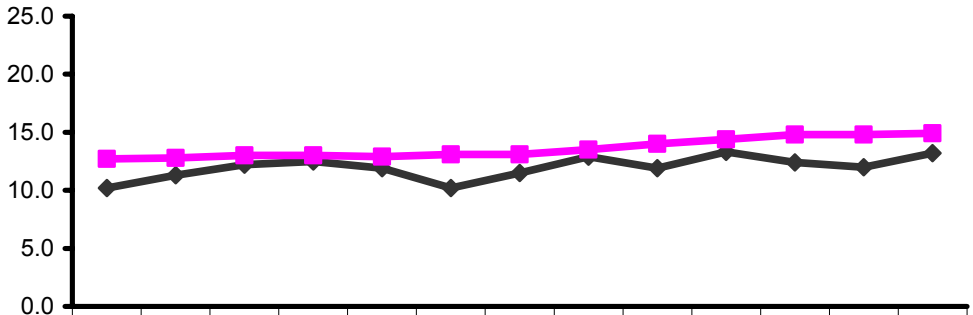
Self-assessed health status is a predictor of mortality and morbidity that reflects known demographic differences, socioeconomic disparities, cultural differences and health patterns within subpopulations. It can help determine the existing burdens of preventable diseases, injuries, and disabilities and can provide new insights to health behaviors that affect physical and mental health. Self-rated health status can also help to guide interventions and health policies to fulfill unmet health needs.[5]

Respondents were asked to describe their health as excellent, very good, good, fair, or poor. Presented here are the percentages of adults who reported that their health was fair or poor.

FAIR OR POOR HEALTH (Table 1.1)

- 13% of Massachusetts adults reported their health as being fair or poor.
- 12% of men and 14% of women reported their health as being fair or poor.
- The percentage of adults who reported fair or poor health increased with increasing age for those 25 and older, with the highest percentage of adults reporting fair or poor health being in the 75 and older age group (26%).
- Hispanic adults (24%) had the highest reporting of fair or poor health.
- The percentage of adults reporting fair or poor health decreased with both increasing education and income.
- Adults in the Metro West region of the state (9%) were less likely to report fair or poor health than adults from all other regions in the state.
- From 1993 to 2005, the percentage of Massachusetts adults who reported fair or poor health increased from 10% to 13%. This is an annual percentage change of 1.3% per year.
- The national estimate of fair or poor health follows a similar pattern with an increase over time ranging from 13% to 15% (Figure 1.1).

**Figure 1.1: Percentage of adults with fair or poor health, MA and US, 1993-2005**




| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 10.2 | 11.3 | 12.2 | 12.5 | 11.9 | 10.2 | 11.5 | 12.9 | 11.9 | 13.3 | 12.4 | 12.0 | 13.2 |
| US median | 12.7 | 12.8 | 13.0 | 13.0 | 12.9 | 13.1 | 13.1 | 13.5 | 14.0 | 14.4 | 14.8 | 14.8 | 14.9 |

Source: Massachusetts BRFSS 1993-2005

[5] National Center for Chronic Disease Prevention and Health Promotion. Measuring Healthy Days. Available at: http://www.cdc.gov/hrqol/pdfs/mhd.pdf Accessed July 17, 2006

## TABLE 1.1 – OVERALL HEALTH STATUS AMONG MASSACHUSETTS ADULTS, 2005

| | FAIR OR POOR HEALTH | |
|---|---|---|
| | % | 95% CI |
| OVERALL | 13.2 | 12.3 - 14.2 |
| GENDER | | |
| MALE | 12.1 | 10.7 - 13.6 |
| FEMALE | 14.2 | 12.9 - 15.5 |
| AGE GROUP | | |
| 18–24 | 7.8 | 4.0 - 11.6 |
| 25–34 | 6.9 | 4.9 - 8.8 |
| 35–44 | 10.2 | 8.4 - 12.0 |
| 45–54 | 14.1 | 12.0 - 16.2 |
| 55–64 | 15.7 | 13.5 - 18.0 |
| 65–74 | 21.4 | 18.1 - 24.6 |
| 75 AND OLDER | 26.4 | 22.8 - 30.0 |
| RACE-ETHNICITY* | | |
| WHITE | 12.3 | 11.3 - 13.3 |
| BLACK | 16.5 | 10.9 - 22.0 |
| HISPANIC | 23.5 | 19.2 - 27.8 |
| ASIAN | † | - |
| EDUCATION | | |
| < HIGH SCHOOL | 31.8 | 26.6 - 36.9 |
| HIGH SCHOOL | 17.1 | 15.0 - 19.2 |
| COLLEGE 1–3 YRS | 14.4 | 12.2 - 16.5 |
| COLLEGE 4+ YRS | 6.8 | 5.8 - 7.8 |
| HOUSEHOLD INCOME | | |
| <$25,000 | 27.4 | 24.6 - 30.2 |
| $25,000–34,999 | 18.4 | 14.2 - 22.7 |
| $35,000–49,999 | 11.9 | 9.4 - 14.4 |
| $50,000–74,999 | 8.5 | 6.4 - 10.5 |
| $75,000+ | 5.1 | 3.9 - 6.2 |
| REGION | | |
| I–WESTERN | 14.6 | 12.2 - 17.0 |
| II–CENTRAL | 15.2 | 12.4 - 18.1 |
| III–NORTH EAST | 13.4 | 11.4 - 15.4 |
| IV–METRO WEST | 9.3 | 7.3 - 11.3 |
| V–SOUTH EAST | 14.3 | 12.0 - 16.6 |
| VI–BOSTON | 14.7 | 12.1 - 17.3 |

* White, Black and Asian race categories refer to non-Hispanic.
† Insufficient Data

## Section 1.2: Quality of Life

Health-related quality of life refers to a person's or group's perceived physical and mental health. These data are used to measure the effects of numerous disorders, short- and long-term disabilities, and diseases in different populations. These measures can be used to help guide policies and interventions to improve health.[6]

All respondents were asked to report (1) the number of days during the past month that their physical health, which includes physical illness and injury, had not been good, (2) the number of days during the past month they would describe their mental health as not good, and (3) the number of days that they had felt sad, blue, or depressed during the past month. Presented here are the percentages of respondents who reported that (1) they had experienced at least 15 days of poor physical health in the previous month, (2) their mental health was not good for at least 15 days during the past month, and (3) they felt sad, blue, or depressed for 15 or more days in the past month.

15+ DAYS IN POOR PHYSICAL HEALTH (Table 1.2)

- 9% of Massachusetts adults reported being in poor physical health for 15 or more days in the previous month.
- 8% of men and 10% of women reported poor physical health.
- Poor physical health decreased with both increasing education and annual household income.
- From 1998 to 2005, the percentage of Massachusetts adults who reported that they experienced 15 or more days of poor physical health in the past month increased from 6% to 9%. This is an annual percentage change of 5% .The US data remained in the range 9% to 10% (Figure 1.2.1).

15+ POOR MENTAL HEALTH DAYS IN PAST MONTH (Table 1.2)

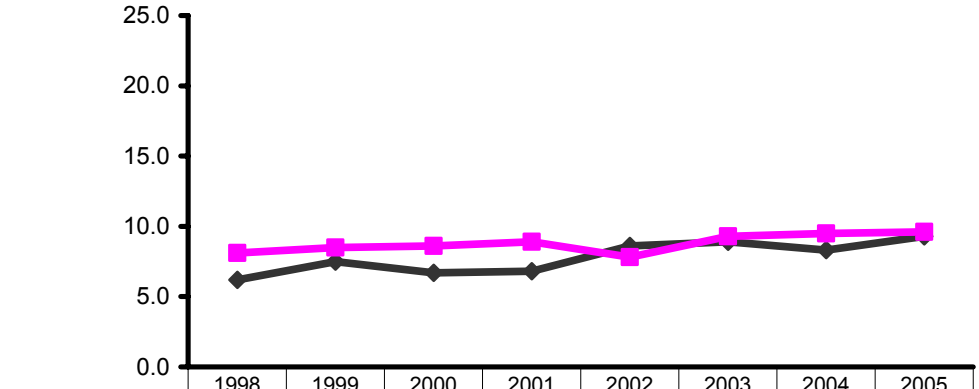
- 9% of Massachusetts adults reported that they had 15 or more poor mental health days in the past 30 days.
- Women (10%) were more likely than men (7%) to report poor mental health.
- Adults ages 65 and older were less likely to report poor mental health than adults in all younger age categories.
- From 1993 to 2005, the percentage of Massachusetts adults who reported poor mental health has remained relatively stable, ranging from 8-10%.The US data had the same patterns and similar values (Figure 1.2.2).

15+ DAYS SAD, BLUE OR DEPRESSED (Table 1.2)

- 8% of Massachusetts adults felt sad, blue or depressed for 15 or more days during the previous month.
- Similar percentages of men (8%) and women (8%) reported feeling sad, blue or depressed for 15 or more days during the previous month.
- 4% of adults with 4+ years of college education felt sad, blue or depressed for 15 or more days in the past month, as opposed to 16% of those with less than a high school education.
- Adults with an annual household income of less than $25,000 were more likely than those with a higher income to report feeling sad, blue or depressed for 15 or more days in the previous month.
- Over the past eight years, the percentage of Massachusetts adults who reported that they experienced 15 or more days of feeling sad, blue or depressed in the past month increased from 6% to 8%. This is an annual percentage change of 2.4% (Data not shown).

[6] National Center for Chronic Disease Prevention and Health Promotion, Health-Related Quality of Life. Available at: http://www.cdc.gov/hrqol/ Accessed July 18, 2006.

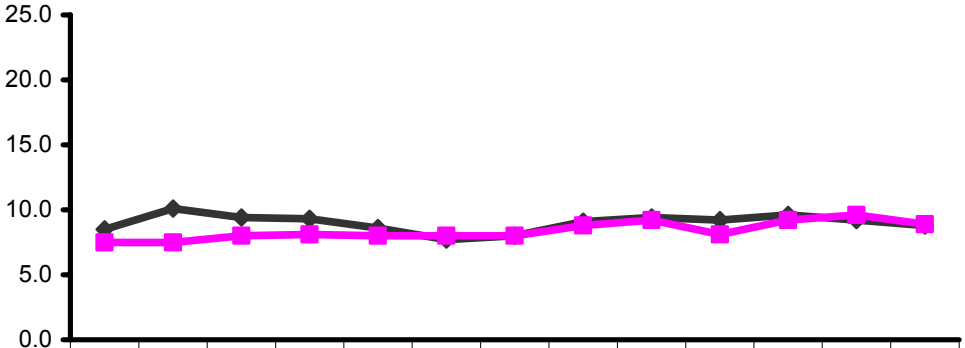
**Figure 1.2.1: Percentage of adults who reported 15 or more days of poor physical health, MA and US, 1998-2005**




| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|
| MA Overall | 6.2 | 7.5 | 6.7 | 6.8 | 8.6 | 8.9 | 8.3 | 9.3 |
| US Median | 8.1 | 8.5 | 8.6 | 8.9 | 7.8 | 9.3 | 9.5 | 9.6 |

Source: Massachusetts BRFSS 1998-2005

**Figure 1.2.2: Percentage of adults with poor mental health for 15 or more days in past month, MA and US,1993-2005**




| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 8.5 | 10.1 | 9.4 | 9.3 | 8.6 | 7.7 | 8 | 9.1 | 9.4 | 9.2 | 9.6 | 9.2 | 8.8 |
| US Median | 7.5 | 7.5 | 8.0 | 8.1 | 8.0 | 8.0 | 8.0 | 8.8 | 9.2 | 8.1 | 9.2 | 9.6 | 8.9 |

Source: Massachusetts BRFSS 1993-2005

## TABLE 1.2 – QUALITY OF LIFE AMONG MASSACHUSETTS ADULTS

| | 15+ DAYS SAD, BLUE, OR DEPRESSED | | | 15+ DAYS OF POOR PHYSICAL HEALTH | | | 15+ DAYS OF POOR MENTAL HEALTH | | |
|---|---|---|---|---|---|---|---|---|---|
| | % | 95% CI | | % | 95% CI | | % | 95% CI | |
| OVERALL | 7.7 | 6.3 | - 9.0 | 9.3 | 8.4 | - 10.2 | 8.8 | 7.9 | - 9.7 |
| GENDER | | | | | | | | | |
| MALE | 7.5 | 5.6 | - 9.4 | 8.1 | 6.9 | - 9.4 | 7.3 | 6.0 | - 8.5 |
| FEMALE | 7.8 | 6.0 | - 9.7 | 10.3 | 9.2 | - 11.5 | 10.3 | 9.0 | - 11.5 |
| AGE GROUP | | | | | | | | | |
| 18–24 | 10.9 | 4.0 | - 17.8 | 6.7 | 2.9 | - 10.5 | 13.9 | 9.2 | - 18.5 |
| 25–34 | 5.7 | 2.6 | - 8.9 | 4.1 | 2.7 | - 5.6 | 8.7 | 6.6 | - 10.9 |
| 35–44 | 6.6 | 4.1 | - 9.1 | 7.5 | 5.8 | - 9.2 | 8.3 | 6.6 | - 10.0 |
| 45–54 | 8.4 | 5.8 | - 11.0 | 11.6 | 9.6 | - 13.6 | 10.8 | 8.9 | - 12.6 |
| 55–64 | 9.3 | 6.6 | - 11.9 | 11.0 | 9.1 | - 13.0 | 9.0 | 7.2 | - 10.9 |
| 65–74 | 8.3 | 4.7 | - 11.9 | 12.5 | 9.9 | - 15.1 | 4.4 | 2.9 | - 5.9 |
| 75 AND OLDER | 5.4 | 2.9 | - 7.9 | 16.3 | 13.4 | - 19.3 | 3.9 | 2.4 | - 5.4 |
| RACE-ETHNICITY* | | | | | | | | | |
| WHITE | 6.9 | 5.6 | - 8.3 | 9.0 | 8.1 | - 9.9 | 8.5 | 7.5 | - 9.4 |
| BLACK | 17.3 | 5.1 | - 29.5 | 15.2 | 8.2 | - 22.2 | 9.5 | 4.2 | - 14.9 |
| HISPANIC | 12.0 | 6.4 | - 17.6 | 10.6 | 7.6 | - 13.5 | 11.0 | 8.0 | - 14.1 |
| ASIAN | † | | - | † | | - | † | | - |
| EDUCATION | | | | | | | | | |
| < HIGH SCHOOL | 16.4 | 8.0 | - 24.8 | 14.5 | 10.3 | - 18.6 | 17.0 | 12.1 | - 21.8 |
| HIGH SCHOOL | 9.0 | 6.4 | - 11.5 | 11.9 | 10.0 | - 13.7 | 9.2 | 7.4 | - 10.9 |
| COLLEGE 1–3 YRS | 10.1 | 7.1 | - 13.2 | 10.6 | 8.6 | - 12.6 | 11.2 | 9.1 | - 13.4 |
| COLLEGE 4+ YRS | 4.1 | 2.7 | - 5.4 | 6.1 | 5.0 | - 7.1 | 5.8 | 4.9 | - 6.8 |
| HOUSEHOLD INCOME | | | | | | | | | |
| <$25,000 | 15.8 | 12.0 | - 19.5 | 18.0 | 15.5 | - 20.5 | 14.9 | 12.7 | - 17.1 |
| $25,000–34,999 | 6.5 | 2.8 | - 10.2 | 10.1 | 7.1 | - 13.1 | 11.6 | 8.0 | - 15.3 |
| $35,000–49,999 | 5.5 | 2.6 | - 8.5 | 9.2 | 6.8 | - 11.6 | 6.6 | 4.6 | - 8.6 |
| $50,000–74,999 | 6.8 | 3.1 | - 10.5 | 6.6 | 4.6 | - 8.6 | 7.5 | 5.3 | - 9.7 |
| $75,000+ | 3.9 | 2.4 | - 5.3 | 4.1 | 3.0 | - 5.2 | 5.4 | 4.2 | - 6.7 |
| REGION | | | | | | | | | |
| I–WESTERN | 9.8 | 5.5 | - 14.1 | 9.0 | 6.8 | - 11.1 | 11.2 | 8.5 | - 13.8 |
| II–CENTRAL | 7.0 | 3.9 | - 10.2 | 11.7 | 9.0 | - 14.3 | 10.5 | 7.9 | - 13.2 |
| III–NORTH EAST | 7.0 | 4.8 | - 9.3 | 8.5 | 6.9 | - 10.1 | 8.0 | 6.3 | - 9.7 |
| IV–METRO WEST | 7.6 | 4.8 | - 10.3 | 7.7 | 6.0 | - 9.5 | 5.3 | 3.8 | - 6.9 |
| V–SOUTH EAST | 8.5 | 5.0 | - 12.0 | 10.8 | 8.6 | - 13.1 | 10.2 | 7.9 | - 12.4 |
| VI–BOSTON | 5.0 | 2.1 | - 7.9 | 8.0 | 6.0 | - 10.0 | 9.5 | 7.1 | - 11.9 |

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient Data

# SECTION 2: HEALTH CARE ACCESS AND UTILIZATION

## Section 2.1: Health Insurance Status

Health insurance status is a key factor affecting access to health care. Uninsured adults are less likely to receive preventive health services such as cancer screenings and vaccinations.[7] Lack of health-care coverage is also associated with delayed medical care and with a lower quality of care. Adults without health care coverage are more likely to have poor health and be at greater risk for chronic diseases than those who have health care coverage. [7]

All respondents were asked if they had any type of health care coverage at the time of the interview. Those who indicated that they had no coverage were asked a follow-up question to be certain that they had considered all types of health care coverage.[8] This included health care coverage from their employer or someone else's employer, a plan that they had bought on their own, Medicare, MassHealth, and coverage through the military, or the Indian Health Service. CDC estimates of uninsured adults, based solely upon the CDC core health insurance question, may differ from estimates derived from the two Massachusetts BRFSS health insurance questions. Table 2.1 presents the Massachusetts BRFSS data.

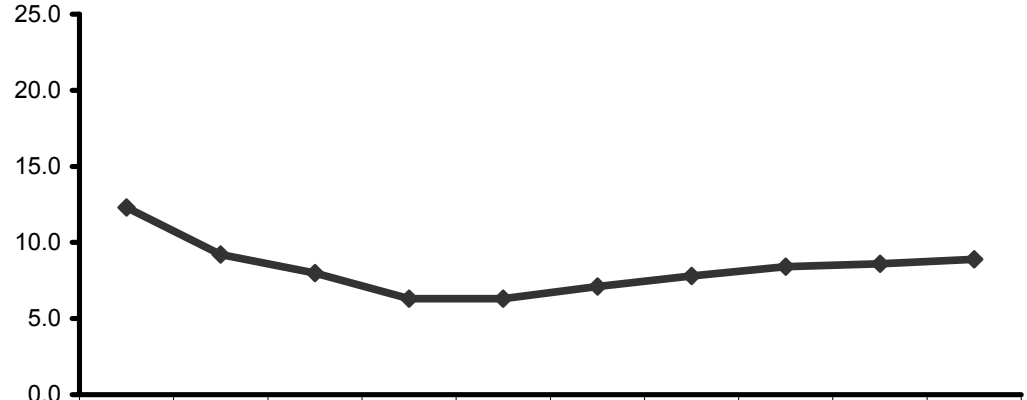
NO HEALTH INSURANCE, AGES 18-64 (Table 2.1)

- 9% of Massachusetts adults reported that they were uninsured.
- Men (11%) were more likely than women (7%) to report being uninsured.
- Being uninsured decreased with increasing age, with 13% of adults ages 18-24 years reporting being uninsured as opposed to 6% of adults ages 55-64 years.
- Hispanic adults (24%) were more likely to report being uninsured than Black (12%) or White (7%) adults.
- Being uninsured decreased with both increasing education and annual household income.
- The Metro West region (5%) had the lowest percentage of reports of being uninsured and the Western region (12%) had the highest.
- From 1996 to 1999, the percentage of adults ages 18-64 with no health insurance decreased from 12% to 6%, then increased to 9% in 2005. This change represents an annual percentage change of 7% for 2000 to 2005 (Figure 2.1).

[7] Self-assessed health status and selected behavioral risk factors among persons with and without health-care coverage. United States, 1994-1995. MMWR 47(09): 176-180.

[8] Please note that CDC estimates of uninsured adults, based solely upon the CDC core health insurance question may differ from estimates derived from the Massachusetts BRFSS. The Massachusetts BRFSS includes a follow-up question to ensure that respondents consider all possible types of health insurance coverage; the addition of this follow-up question leads to differences between CDC and Massachusetts BRFSS estimates.

**Figure 2.1: Percentage of adults ages 18-64 without health insurance, MA, 1996-2005**




| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 12.3 | 9.2 | 8.0 | 6.3 | 6.3 | 7.1 | 7.8 | 8.4 | 8.6 | 8.9 |

Source: Massachusetts BRFSS 1996-2005
Note: No comparable U.S. medians are available for this topic.

## TABLE 2.1 – NO HEALTH INSURANCE AMONG MASSACHUSETTS ADULTS, AGES 18-64, 2005

| | NO HEALTH INSURANCE | |
|---|---|---|
| | % | 95% CI |
| OVERALL | 8.9 | 7.9 - 10.0 |
| GENDER | | |
| MALE | 10.5 | 8.8 - 12.2 |
| FEMALE | 7.4 | 6.3 - 8.6 |
| AGE GROUP | | |
| 18–24 | 12.6 | 8.8 - 16.5 |
| 25–34 | 12.3 | 9.4 - 15.1 |
| 35–44 | 7.6 | 6.0 - 9.2 |
| 45–54 | 7.1 | 5.5 - 8.7 |
| 55–64 | 6.0 | 4.5 - 7.5 |
| RACE-ETHNICITY* | | |
| WHITE | 7.0 | 6.0 - 7.9 |
| BLACK | 11.5 | 7.2 - 15.7 |
| HISPANIC | 23.8 | 18.4 - 29.2 |
| ASIAN | † | - |
| EDUCATION | | |
| < HIGH SCHOOL | 23.1 | 16.8 - 29.4 |
| HIGH SCHOOL | 12.0 | 9.8 - 14.2 |
| COLLEGE 1–3 YRS | 9.8 | 7.4 - 12.1 |
| COLLEGE 4+ YRS | 4.7 | 3.6 - 5.7 |
| HOUSEHOLD INCOME | | |
| <$25,000 | 22.0 | 18.4 - 25.5 |
| $25,000–34,999 | 19.2 | 13.9 - 24.5 |
| $35,000–49,999 | 10.4 | 7.2 - 13.5 |
| $50,000–74,999 | 2.5 | 1.3 - 3.7 |
| $75,000+ | 2.3 | 1.4 - 3.2 |
| REGION | | |
| I–WESTERN | 12.3 | 9.2 - 15.4 |
| II–CENTRAL | 6.8 | 4.6 - 9.0 |
| III–NORTH EAST | 9.4 | 7.0 - 11.8 |
| IV–METRO WEST | 4.6 | 3.0 - 6.3 |
| V–SOUTH EAST | 11.3 | 8.6 - 14.1 |
| VI–BOSTON | 11.4 | 8.1 - 14.6 |

* White, Black and Asian race categories refer to non-Hispanic.

† Insufficient Data

## Section 2.2: Health Care Access

All respondents were asked if they had a person that they thought of as their personal doctor or health care provider. All respondents were also asked whether they were unable to see a doctor in the past year due to cost. Presented here are the percentage of respondents who reported that they did have a personal health care provider and the percentage of respondents who reported that cost had prevented them from seeing a doctor at some point in the past year.

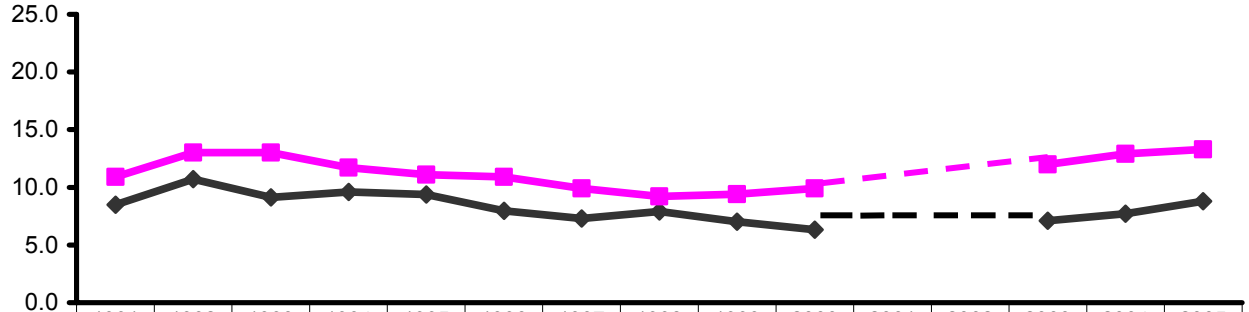
HAVE PERSONAL HEALTH CARE PROVIDER (Table 2.2)

- 87% of Massachusetts adults reported that they have a personal doctor or health care provider.
- Women (90%) were more likely than men (84%) to report having a personal doctor or health care provider.
- Adults ages 18-34 years were less likely to have a personal health care provider than adults ages 35 years and older.
- Hispanic adults (62%) were less likely than White (90%) and Black (84%) adults to report having a personal health care provider.
- Adults with an annual household income of more than $75,000 (93%) were more likely to have a personal health care provider than adults with an annual household income of $50,000 or less.
- The percentage of Massachusetts adults who reported that they have a personal health care provider remained relatively stable from 2001 to 2005 (Data not shown).

COULD NOT SEE DOCTOR DUE TO COST (Table 2.2)

- 9% of Massachusetts adults reported that they had not seen a doctor at some point in the past year due to cost.
- Women (10%) were more likely than men (8%) to report that they had not seen a doctor due to cost in the past year.
- White adults (7%) were less likely than Hispanic (18%) and Black (15%) adults to report not seeing a doctor over the past year due to cost.
- Adults with an education level of 4 years or more of college (6%) were less likely than those with education levels of less than high school (17%), high school (11%), and 1-3 years of college (10%) to report not seeing a doctor over the past year due to cost.
- The percentage of adults reporting that they were unable to see a doctor due to cost decreased with increasing annual household income.
- From 1991 to 2000, the percentage of Massachusetts adults who were unable to see a doctor due to cost decreased from 9% to 6% and then did not change significantly from 2000 to 2005.
- The national estimates for inability to see a doctor due to cost were higher than the Massachusetts estimates from 1991 to 2005 (Figure 2.2).

**Figure 2.2: Percentage of adults who were unable to see a doctor due to cost, MA and US, 1991-2005**




| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 8.5 | 10.7 | 9.1 | 9.6 | 9.4 | 8.0 | 7.3 | 7.9 | 7.0 | 6.3 | | | 7.1 | 7.7 | 8.8 |
| US median | 10.9 | 13.0 | 13.0 | 11.7 | 11.1 | 10.9 | 9.9 | 9.2 | 9.4 | 9.9 | | | 12.0 | 12.9 | 13.3 |

Source: Massachusetts BRFSS 1991-2005
Note: Dotted line signifies years in which questions were not asked.

| TABLE 2.2 – HEALTH CARE ACCESS AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | HAVE PERSONAL HEALTH CARE PROVIDER | | COULD NOT SEE DOCTOR DUE TO COST | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 87.1 | 86.1 - 88.2 | 8.8 | 7.9 - 9.7 |
| GENDER | | | | |
| MALE | 83.5 | 81.7 - 85.4 | 7.8 | 6.5 - 9.0 |
| FEMALE | 90.4 | 89.2 - 91.6 | 9.8 | 8.5 - 11.0 |
| AGE GROUP | | | | |
| 18–24 | 74.6 | 69.4 - 79.8 | 12.5 | 8.3 - 16.8 |
| 25–34 | 77.9 | 74.6 - 81.3 | 11.8 | 9.3 - 14.2 |
| 35–44 | 87.5 | 85.5 - 89.5 | 9.4 | 7.7 - 11.2 |
| 45–54 | 91.1 | 89.4 - 92.8 | 9.5 | 7.7 - 11.3 |
| 55–64 | 93.9 | 92.4 - 95.3 | 6.5 | 4.9 - 8.1 |
| 65–74 | 94.0 | 91.9 - 96.1 | 5.6 | 3.6 - 7.7 |
| 75 AND OLDER | 96.3 | 94.8 - 97.8 | 2.1 | 1.1 - 3.1 |
| RACE-ETHNICITY* | | | | |
| WHITE | 90.3 | 89.3 - 91.3 | 7.3 | 6.4 - 8.2 |
| BLACK | 83.7 | 77.7 - 89.7 | 14.7 | 9.1 - 20.3 |
| HISPANIC | 62.1 | 56.4 - 67.8 | 18.2 | 13.7 - 22.7 |
| ASIAN | 74.0 | 64.0 - 84.0 | 9.8 | 4.1 - 15.6 |
| EDUCATION | | | | |
| < HIGH SCHOOL | 72.6 | 67.3 - 77.9 | 16.9 | 12.1 - 21.6 |
| HIGH SCHOOL | 85.8 | 83.6 - 88.0 | 10.8 | 9.0 - 12.7 |
| COLLEGE 1–3 YRS | 87.6 | 85.3 - 89.9 | 9.8 | 8.0 - 11.7 |
| COLLEGE 4+ YRS | 90.5 | 89.1 - 91.8 | 5.6 | 4.5 - 6.7 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 79.3 | 76.5 - 82.2 | 17.9 | 15.3 - 20.5 |
| $25,000–34,999 | 79.0 | 74.4 - 83.6 | 12.7 | 9.6 - 15.9 |
| $35,000–49,999 | 86.6 | 83.5 - 89.7 | 9.5 | 7.2 - 11.9 |
| $50,000–74,999 | 91.9 | 89.9 - 93.9 | 6.5 | 4.2 - 8.9 |
| $75,000+ | 93.0 | 91.4 - 94.5 | 3.1 | 2.1 - 4.2 |
| REGION | | | | |
| I–WESTERN | 85.3 | 82.5 - 88.2 | 10.4 | 8.1 - 12.7 |
| II–CENTRAL | 90.0 | 87.5 - 92.5 | 10.4 | 7.8 - 13.0 |
| III–NORTH EAST | 85.8 | 83.3 - 88.4 | 7.8 | 6.1 - 9.4 |
| IV–METRO WEST | 90.3 | 88.2 - 92.5 | 7.0 | 5.0 - 9.0 |
| V–SOUTH EAST | 88.2 | 85.7 - 90.6 | 9.2 | 7.0 - 11.4 |
| VI–BOSTON | 78.3 | 74.5 - 82.2 | 9.4 | 7.1 - 11.7 |

* White, Black, and Asian race categories refer to non-Hispanic

# SECTION 3: RISK FACTORS AND PREVENTIVE BEHAVIORS

## Section 3.1: Tobacco Use

Tobacco use is the leading preventable cause of death, accounting for more than 9,000 deaths per year in Massachusetts alone. [9] It is a major risk factor for cancer, heart, and lung diseases. The health and economic burden of tobacco use has resulted in more than 2.7 billion dollars per year in health care costs in Massachusetts.[9] The Massachusetts Tobacco Control Program was established in 1993 to control tobacco use and since the implementation of the program, the number of adults who smoke in Massachusetts has declined (Figure 3.1.1).

A current smoker was defined as someone who has smoked at least 100 cigarettes in their lifetime and who currently smokes either some days or everyday. A current smoker who reported smoking 21 or more cigarettes per day was defined as a heavy smoker. Presented here are the percentage of adults who were current smokers and the percentage of adults who were heavy smokers.

CURRENT SMOKER (Table 3.1)

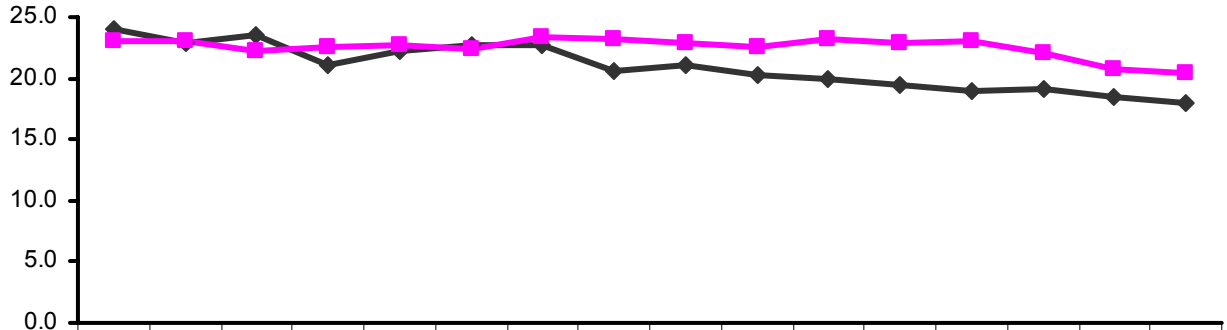
- 18% of Massachusetts adults reported being current smokers.
- Similar percentages of men (18%) and women (18%) reported being current smokers.
- Current smoking decreased with increasing age, with 23% of adults ages 18-24 years reporting current smoking as opposed to 6% of adults ages 75 years and older.
- Adults with an education level of 4 or more years of college (9%) were less likely than adults with an education level of less than high school (29%), high school (27%), and 1-3 years of college (21%) to report current smoking.
- Adults with an annual household income of $75,000 or more (11%) were less likely than those with an annual household income of less than $75,000 to report being current smokers.
- Between 1990 and 2005, the percentage of adults who reported being current smokers has decreased from 24% to 18%. This is an average annual percentage decrease of 1.8%.
- The national percentage of adults reporting that they are current smokers remained around 23% from 1990 to 2002 and then dropped to 21% in 2005 (Figure 3.1.1).

HEAVY SMOKER (Table 3.1)

- 2% of Massachusetts adults reported they were heavy smokers.
- 3% of men and 2% of women reported they were heavy smokers.
- Adults with an education level of 4 or more years of college (less than 1%) were less likely to be heavy smokers than adults with a lower level of education.
- Adults with an annual household income of less than $25,000 (4%) were more likely to be heavy smokers than adults with an annual household income of $75,000 or more.
- Between 1990 and 2005, the percentage of heavy smokers among Massachusetts adults dropped from 6% to 2%. This represents an average annual change of 7.4% (Figure 3.1.2).

[9] Massachusetts Department of Public Health, Massachusetts Tobacco Control Program. Available at http://www.mass.gov/dph/mtcp Accessed July 19, 2006.

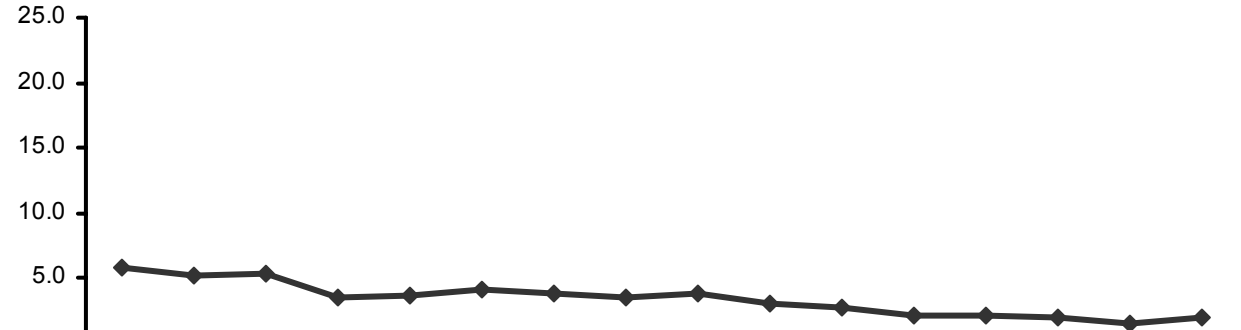
## Figure 3.1.1: Percentage of adults who currently smoke, MA and US, 1990-2005




| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 24.1 | 22.9 | 23.5 | 21.1 | 22.3 | 22.7 | 22.7 | 20.6 | 21.1 | 20.2 | 19.9 | 19.5 | 18.9 | 19.1 | 18.5 | 18.1 |
| US Median | 23.0 | 23.1 | 22.2 | 22.6 | 22.7 | 22.4 | 23.4 | 23.2 | 22.9 | 22.6 | 23.2 | 22.8 | 23.0 | 22.0 | 20.8 | 20.5 |

Source: Massachusetts BRFSS 1990-2005

## Figure 3.1.2: Percentage of adults who are heavy smokers, MA, 1990-2005




| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 5.8 | 5.2 | 5.3 | 3.5 | 3.7 | 4.1 | 3.9 | 3.5 | 3.9 | 3.1 | 2.7 | 2.2 | 2.2 | 2.0 | 1.6 | 2.0 |

Source: Massachusetts BRFSS 1990-2005
Note: No comparable U.S. medians are available for this topic.

| TABLE 3.1 – TOBACCO USE AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | CURRENT SMOKER | | HEAVY SMOKER | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 18.1 | 16.9 - 19.2 | 2.0 | 1.5 - 2.5 |
| GENDER | | | | |
| MALE | 18.2 | 16.3 - 20.1 | 2.5 | 1.6 - 3.4 |
| FEMALE | 17.9 | 16.4 - 19.3 | 1.6 | 1.0 - 2.1 |
| AGE GROUP | | | | |
| 18–24 | 22.9 | 17.5 - 28.3 | † | - |
| 25–34 | 22.7 | 19.3 - 26.1 | 1.6 | 0.3 - 3.0 |
| 35–44 | 19.2 | 16.9 - 21.6 | 3.2 | 1.7 - 4.6 |
| 45–54 | 19.4 | 17.0 - 21.7 | 3.3 | 2.0 - 4.7 |
| 55–64 | 16.2 | 14.0 - 18.5 | 1.9 | 0.9 - 3.0 |
| 65–74 | 12.6 | 9.9 - 15.3 | 0.6 | 0.1 - 1.1 |
| 75 AND OLDER | 5.5 | 3.7 - 7.3 | † | - |
| RACE-ETHNICITY* | | | | |
| WHITE | 18.4 | 17.1 - 19.6 | 2.2 | 1.6 - 2.8 |
| BLACK | 16.2 | 11.7 - 20.6 | 1.3 | 0.1 - 3.3 |
| HISPANIC | 17.9 | 13.2 - 22.7 | 1.4 | 0.1 - 4.9 |
| ASIAN | † | - | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 28.5 | 22.9 - 34.1 | 3.2 | 1.2 - 5.3 |
| HIGH SCHOOL | 27.1 | 24.4 - 29.7 | 4.6 | 2.9 - 6.2 |
| COLLEGE 1–3 YRS | 21.4 | 18.8 - 24.0 | 1.7 | 0.9 - 2.6 |
| COLLEGE 4+ YRS | 9.0 | 7.7 - 10.2 | 0.5 | 0.2 - 0.8 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 26.2 | 23.3 - 29.1 | 3.8 | 2.2 - 5.3 |
| $25,000–34,999 | 25.3 | 20.5 - 30.1 | 1.6 | 0.0 - 3.3 |
| $35,000–49,999 | 22.0 | 18.4 - 25.6 | 3.0 | 1.5 - 4.6 |
| $50,000–74,999 | 17.7 | 14.9 - 20.5 | 2.5 | 1.0 - 4.0 |
| $75,000+ | 10.5 | 8.7 - 12.2 | 0.4 | 0.1 - 0.7 |
| REGION | | | | |
| I–WESTERN | 18.8 | 15.7 - 22.0 | 2.2 | 0.7 - 3.7 |
| II–CENTRAL | 21.2 | 17.9 - 24.6 | 2.1 | 0.9 - 3.3 |
| III–NORTH EAST | 18.3 | 15.6 - 20.9 | 1.1 | 0.5 - 1.8 |
| IV–METRO WEST | 12.4 | 10.1 - 14.8 | 1.2 | 0.2 - 2.2 |
| V–SOUTH EAST | 20.4 | 17.6 - 23.3 | 3.3 | 1.8 - 4.9 |
| VI–BOSTON | 19.5 | 16.3 - 22.7 | 2.5 | 0.7 - 4.3 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient data

## Section 3.2: Smoking Cessation

Respondents who were current smokers were asked if they had stopped smoking for one day or longer in the past 12 months because they were trying to quit smoking. They were also asked if they had any intention of trying to quit smoking within the next 30 days. Presented here are the percentage of current smokers who reported that they had attempted to quit smoking for one day or longer in the past 12 months and the percentage of adults who reported that they had plans to quit smoking within the next 30 days.

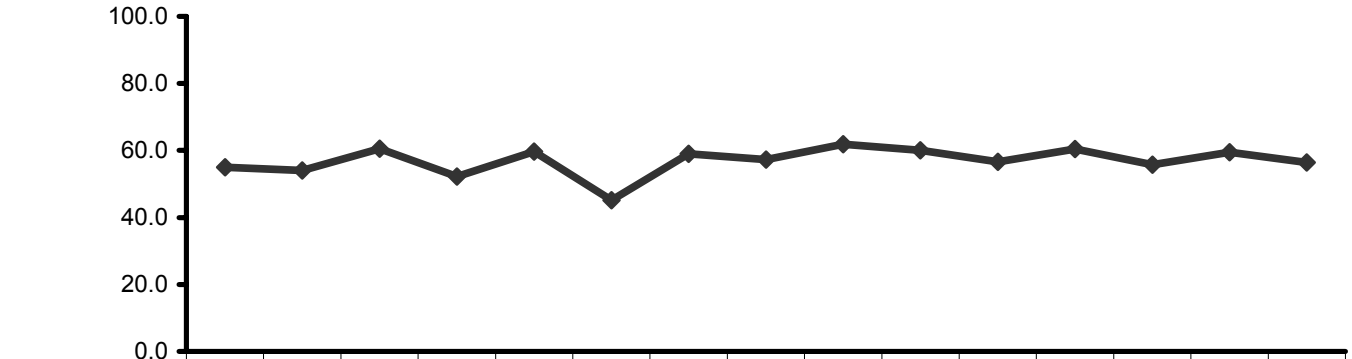
QUIT ATTEMPT AMONG CURRENT SMOKERS (Table 3.2)

- 56% of current smokers reported having made at least one quit attempt in the past year.
- Similar percentages of men (56%) and women (57%) reported having made at least one quit attempt in the past year.
- Adults smokers ages 18-24 (77%) were more likely than adult smokers ages 35 to 54 to have made at least one quit attempt in the past year.
- The percentage of adults who had made at least one quit attempt in the past year remained in the range of 55% to 60% from 1991 to 2005 (Figure 3.2.1).

PLANNING TO QUIT AMONG CURRENT SMOKERS (Table 3.2)

- 33% of Massachusetts smokers reported that they planned to quit smoking within the next 30 days.
- 36% of men and 31% of women reported that they planned to quit smoking within the next 30 days.
- The percentages of adults smokers in Massachusetts who plan to quit smoking remained in the range of 38% to 42% in the time period between 1997 and 2001 then decreased to 33% in 2005. However, there is insufficient data to determine if this decrease is significant (Figure 3.2.2).

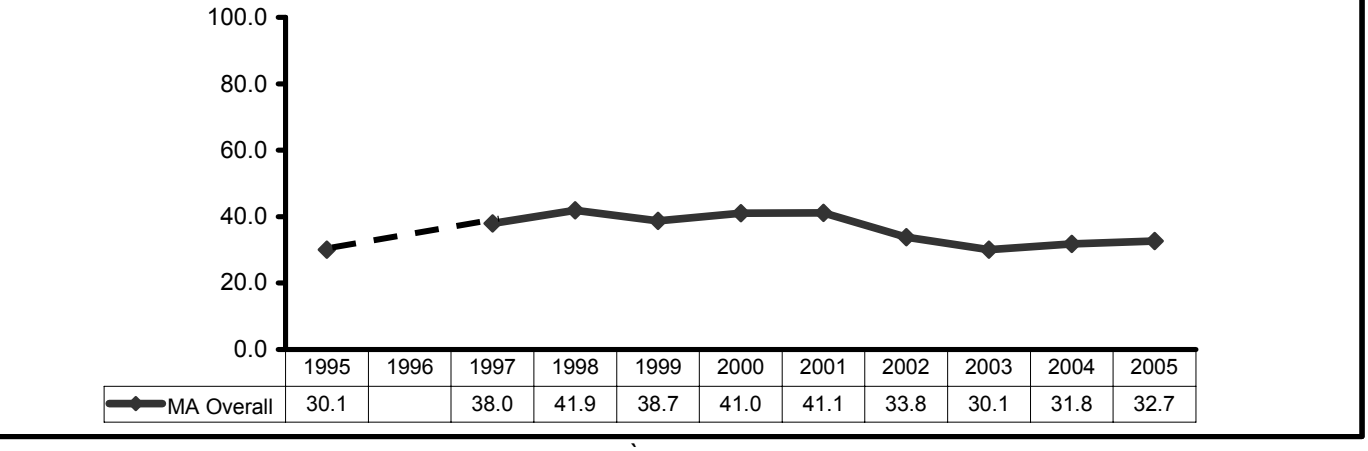
## Figure 3.2.1: Percentage of smokers who quit for at least one day in the past year, MA, 1991-2005




| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 55.0 | 54.0 | 60.5 | 52.2 | 59.7 | 45.1 | 59.0 | 57.3 | 61.9 | 60.0 | 56.6 | 60.4 | 55.7 | 59.5 | 56.4 |

Source: Massachusetts BRFSS 1991-2005
Note: US medians are not available for this topic

## Figure 3.2.2: Percentage of smokers who plan to quit smoking within the next 30 days, MA, 1995-2005




| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 30.1 | | 38.0 | 41.9 | 38.7 | 41.0 | 41.1 | 33.8 | 30.1 | 31.8 | 32.7 |

Source: Massachusetts BRFSS 1995-2005
Note: Dotted line signifies years in which questions were not asked. No comparable U.S. medians are available for this topic.

| TABLE 3.2 – SMOKING CESSATION AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | QUIT ATTEMPT | | PLANNING TO QUIT | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 56.4 | 51.7 - 61.1 | 32.7 | 27.7 - 37.7 |
| GENDER | | | | |
| MALE | 55.9 | 48.0 - 63.9 | 35.6 | 26.8 - 44.5 |
| FEMALE | 56.8 | 51.2 - 62.4 | 30.6 | 25.0 - 36.2 |
| AGE GROUP | | | | |
| 18–24 | 76.5 | 62.8 - 90.1 | 46.3 | 28.2 - 64.4 |
| 25–34 | 58.0 | 46.3 - 69.7 | 35.0 | 22.3 - 47.8 |
| 35–44 | 52.9 | 43.7 - 62.1 | 23.7 | 15.6 - 31.7 |
| 45–54 | 47.0 | 38.5 - 55.5 | 34.4 | 25.8 - 43.1 |
| 55–64 | 60.3 | 49.4 - 71.2 | 28.8 | 17.2 - 40.4 |
| 65–74 | 48.0 | 32.6 - 63.4 | 35.5 | 20.0 - 51.0 |
| 75 AND OLDER | 59.9 | 37.5 - 82.3 | 25.2 | 3.2 - 47.2 |
| RACE-ETHNICITY* | | | | |
| WHITE | 56.3 | 51.3 - 61.4 | 31.2 | 26.0 - 36.4 |
| BLACK | 59.8 | 43.7 - 76.0 | 38.2 | 19.5 - 56.9 |
| HISPANIC | 57.7 | 37.7 - 77.8 | 47.0 | 25.4 - 68.6 |
| ASIAN | 88.0 | 68.5 - 98.8 | 73.0 | 34.3 - 98.9 |
| EDUCATION | | | | |
| < HIGH SCHOOL | 66.6 | 54.6 - 78.5 | 42.1 | 24.9 - 59.2 |
| HIGH SCHOOL | 53.3 | 45.8 - 60.8 | 28.9 | 21.3 - 36.6 |
| COLLEGE 1–3 YRS | 63.6 | 55.0 - 72.2 | 32.7 | 23.5 - 41.9 |
| COLLEGE 4+ YRS | 47.1 | 37.0 - 57.2 | 34.9 | 24.9 - 45.0 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 67.2 | 59.7 - 74.7 | 36.7 | 28.0 - 45.3 |
| $25,000–34,999 | 57.4 | 44.0 - 70.9 | 35.5 | 20.1 - 50.8 |
| $35,000–49,999 | 53.7 | 42.1 - 65.2 | 28.9 | 17.9 - 39.9 |
| $50,000–74,999 | 50.2 | 38.3 - 62.0 | 21.4 | 11.6 - 31.3 |
| $75,000+ | 53.1 | 41.9 - 64.2 | 30.7 | 19.5 - 41.9 |
| REGION | | | | |
| I–WESTERN | 46.2 | 34.2 - 58.3 | 23.0 | 11.5 - 34.6 |
| II–CENTRAL | 60.0 | 49.4 - 70.5 | 39.9 | 27.2 - 52.6 |
| III–NORTH EAST | 61.3 | 51.0 - 71.6 | 32.7 | 19.8 - 45.7 |
| IV–METRO WEST | 56.2 | 42.6 - 69.8 | 35.6 | 21.1 - 50.1 |
| V–SOUTH EAST | 56.8 | 46.7 - 66.9 | 27.7 | 18.9 - 36.4 |
| VI–BOSTON | 55.5 | 43.7 - 67.4 | 41.1 | 28.3 - 53.8 |

* White, Black, and Asian race categories refer to non-Hispanic

## Section 3.3: Environmental Tobacco Smoke

Environmental tobacco smoke, also known as secondhand smoke, is a mixture of smoke given off by the burning end of tobacco products and the smoke exhaled by smokers. Secondhand smoke has harmful effects on nonsmokers. Nonsmokers who are exposed to environmental tobacco smoke increase their heart disease risk by 25–30 percent and their lung cancer risk by 20–30 percent. In addition, environmental smoke exposure causes respiratory symptoms in children and slows their lung growth. More than 126 million nonsmoking adults continue to be exposed to environmental smoke in homes, vehicles, workplaces, and public places.[10]

Respondents were asked about rules regarding smoking in their household. Answer selections were: no smoking is allowed, smoking is allowed in some places or at some times, or smoking is permitted anywhere in the household. Presented here is the percentage of respondents reporting that no smoking was allowed in their household. Respondents were also asked about exposure to environmental tobacco smoke at their home, work, or other places. Environmental Tobacco Smoke (ETS) exposure was defined in one of two ways depending on whether respondents reported working outside the home or not on an earlier employment status question. Among the employed (including the self-employed), ETS exposure was defined as any report of exposure to ETS at work, at home, or in other places. Among those not employed outside the home, ETS exposure was defined as any exposure to ETS at home or in other places in the past 7 days.

LIVE IN A HOUSEHOLD WHERE SMOKING IS NOT ALLOWED (Table 3.3)

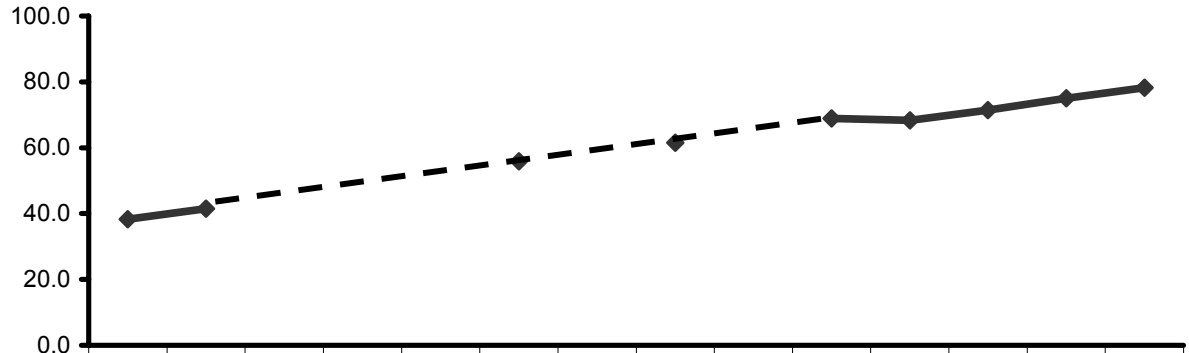
- 78% of Massachusetts adults live in a household where smoking is not allowed.
- Living in a household where smoking is not allowed was fairly consistent by age group.
- Asian (91%) and Hispanic (88%) adults were more likely to report living in a household where smoking is not allowed than White (77%) or Black (74%) adults.
- Adults with four or more years of college (86%) were more likely than adults with an education level of less than high school (71%), high school (70%), or 1-3 years of college (74%) to report living in a household where smoking is not allowed.
- The percentage of adults reporting that they live in a household where smoking is not allowed increased from 38% in 1992 to 78% in 2005. This represents an average annual percentage change of 7% (Figure 3.3).

ANY EXPOSURE TO ENVIRONMENTAL TOBACCO SMOKE (Table 3.3)

- 45% of Massachusetts adults were exposed to environmental tobacco smoke in the past 7 days.
- Men (51%) were more likely than women (39%) to report that they were exposed to environmental tobacco smoke in the past 7 days.
- Adults ages 18-24 (77%) were more likely to be exposed to environmental tobacco smoke in the past 7 days than adults of all other ages.
- Adults with four or more years of college (35%) were less likely than adults with lower levels of education to be exposed to environmental tobacco smoke in the past 7 days.
- As annual household income increased, exposure to environmental tobacco in the past 7 days smoke decreased.

[10] National Center for Chronic Disease Prevention and Health Promotion, Tobacco Information and Prevention Source (TIPS). Secondhand Smoke. Available at: http://www.cdc.gov/tobacco/factsheets/secondhand_smoke_factsheet.htm Accessed July 24, 2006.

**Figure 3.3: Percentage of adults who live in a household where smoking is not allowed, MA, 1992-2005**




| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 38.3 | 41.5 | | | | 55.9 | | 61.5 | | 68.9 | 68.3 | 71.4 | 75.0 | 78.2 |

Source: Massachusetts BRFSS 1992-2005
Note: Dotted line signifies years in which questions were not asked. US medians are unavailable for this topic.

## TABLE 3.3 – ENVIRONMENTAL TOBACCO AMONG MASSACHUSETTS ADULTS, 2005

| | LIVE IN A HOUSEHOLD WHERE SMOKING IS NOT ALLOWED | | EXPOSED TO ENVIRONMENTAL TOBACCO SMOKE | |
|---|---|---|---|---|
| | % | 95% CI | % | 95% CI |
| OVERALL | 78.2 | 76.6 - 79.9 | 44.7 | 42.6 - 46.8 |
| GENDER | | | | |
| MALE | 78.6 | 75.9 - 81.3 | 50.6 | 47.2 - 53.9 |
| FEMALE | 77.9 | 75.8 - 80.0 | 39.4 | 36.8 - 42.1 |
| AGE GROUP | | | | |
| 18–24 | 72.5 | 64.5 - 80.5 | 76.9 | 69.2 - 84.6 |
| 25–34 | 84.7 | 81.0 - 88.4 | 53.1 | 47.6 - 58.6 |
| 35–44 | 78.1 | 74.7 - 81.5 | 41.4 | 37.3 - 45.3 |
| 45–54 | 77.0 | 73.5 - 80.4 | 41.2 | 37.2 - 45.5 |
| 55–64 | 77.0 | 73.2 - 80.8 | 33.2 | 28.8 - 37.6 |
| 65–74 | 77.1 | 72.4 - 81.7 | 31.3 | 26.0 - 36.6 |
| 75 AND OLDER | 79.5 | 74.7 - 84.4 | 28.7 | 23.1 - 34.4 |
| RACE-ETHNICITY* | | | | |
| WHITE | 77.0 | 75.1 - 78.9 | 44.2 | 41.9 - 46.5 |
| BLACK | 74.2 | 66.7 - 81.6 | 54.7 | 45.3 - 64.2 |
| HISPANIC | 88.3 | 83.3 - 93.3 | 46.7 | 37.8 - 55.5 |
| ASIAN | 91.1 | 84.4 - 97.7 | 49.5 | 35.5 - 63.4 |
| EDUCATION | | | | |
| < HIGH SCHOOL | 71.0 | 64.2 - 77.9 | 54.6 | 46.6 - 62.7 |
| HIGH SCHOOL | 69.8 | 66.1 - 73.5 | 52.4 | 48.3 - 56.5 |
| COLLEGE 1–3 YRS | 73.8 | 69.6 - 78.0 | 52.1 | 47.2 - 56.9 |
| COLLEGE 4+ YRS | 86.4 | 84.5 - 88.4 | 35.2 | 32.3 - 38.1 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 68.1 | 63.7 - 72.4 | 50.5 | 45.8 - 55.2 |
| $25,000–34,999 | 72.3 | 66.0 - 78.7 | 53.0 | 45.6 - 60.4 |
| $35,000–49,999 | 71.9 | 67.0 - 76.9 | 45.9 | 40.2 - 51.5 |
| $50,000–74,999 | 80.6 | 76.4 - 84.7 | 44.6 | 39.2 - 49.9 |
| $75,000+ | 86.1 | 83.6 - 88.7 | 39.9 | 36.2 - 43.7 |
| REGION | | | | |
| I–WESTERN | 77.7 | 73.3 - 82.1 | 48.3 | 42.8 - 53.8 |
| II–CENTRAL | 75.0 | 70.2 - 79.7 | 41.6 | 35.9 - 47.3 |
| III–NORTH EAST | 80.9 | 77.4 - 84.5 | 46.2 | 41.4 - 51.4 |
| IV–METRO WEST | 84.5 | 81.3 - 87.8 | 38.9 | 34.2 - 43.5 |
| V–SOUTH EAST | 73.6 | 69.4 - 77.7 | 48.0 | 43.0 - 52.9 |
| VI–BOSTON | 74.2 | 68.9 - 79.5 | 47.8 | 41.8 - 53.8 |

* White, Black, and Asian race categories refer to non-Hispanic

## Section 3.4: Alcohol Use

Alcohol is a central nervous system depressant. The effects of alcohol on the body are directly related to the amount of alcohol consumed. Adverse effects of alcohol can include impaired judgment, reduced reaction time, slurred speech, and unsteadiness.[11] Excessive drinking, including binge and heavy drinking, has numerous chronic (long-term) and acute (short-term) health effects. Chronic health consequences of excessive drinking can include liver cirrhosis, pancreatitis, various cancers such as cancer of the liver, mouth, throat, larynx and esophagus, high blood pressure, and psychological disorders. Acute health consequences of excessive drinking can include alcohol poisoning, motor vehicle injuries and falls.[12]

All respondents were asked about their consumption of alcohol in the past month. A drink of alcohol was defined as one can or bottle of beer, one glass of wine, one can or bottle of wine cooler, one cocktail, or one shot of liquor. Binge drinking was defined as consumption of five or more drinks on any one occasion in the past month. Heavy drinking was defined as consumption of more than 60 drinks in the past month for men and consumption of more than 30 drinks in the past month for women. Presented here are the percentage of adults who reported binge drinking and the percentage of adults who reported heavy drinking.

BINGE DRINKING (Table 3.4)

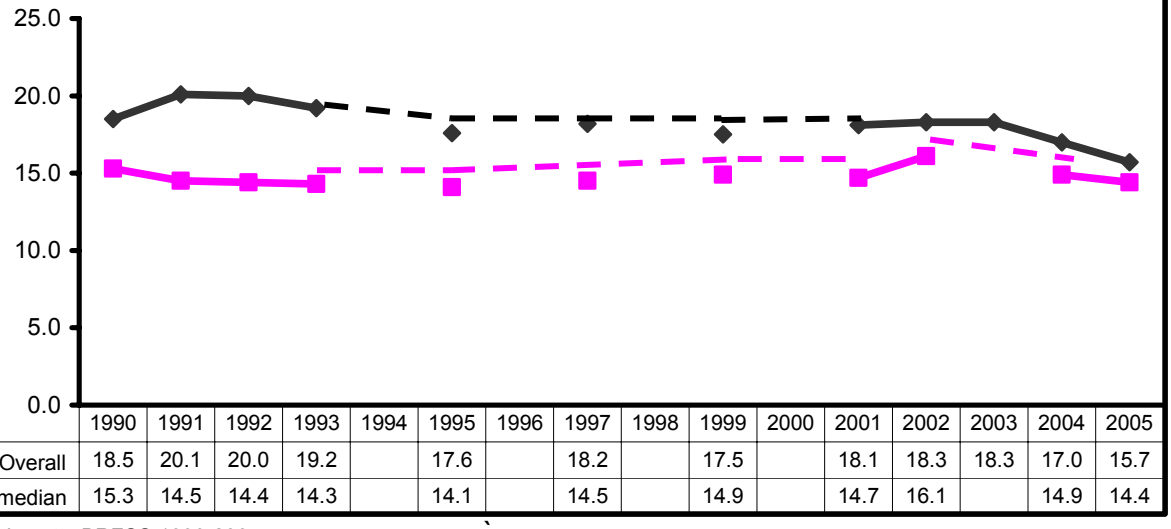
- 16% of Massachusetts adults reported binge drinking in the past month.
- Men (24%) were more likely than women (8%) to report binge drinking in the past month.
- Binge drinking decreased with increasing age, with adults ages 18-34 being more likely to report binge drinking than adults ages 35 and older.
- White adults (16%) were more likely than Asian adults (10%) to report binge drinking.
- The percentage of adults who reported binge drinking in the past 30 days has decreased, representing an average annual percentage change of approximately 1% from 1990 to 2005.
- The percentage of Massachusetts binge drinking adults remained higher than the national estimates over the years. However, the decrease from 2003-2005 of 18% to 16% in the percentage of Massachusetts adults reporting binge drinking tends to diminish this difference (Figure 3.4.1).

HEAVY DRINKING (Table 3.4)

- 6% of Massachusetts adults reported heavy drinking in the past month.
- 7% of men and 5% of women reported heavy drinking in the past month.
- Heavy drinking decreased with increasing age with 12% of adults ages 18-24 reporting heavy drinking as opposed to 3% of adults age 75 and older.
- Hispanic adults (3%) were less likely than White adults (7%) to report heavy drinking.
- The percentage of adults who reported heavy drinking in the past 30 days remained in the range of 6% to 8% from 1992 to 2005. This was slightly higher than the national percentage of heavy drinking over the same time period (Figure 3.4.2).

[11] National Center for Chronic Disease Prevention and Health Promotion, Alcohol and Public Health. Available at: http://www.cdc.gov/alcohol/faqs.htm/ Accessed July 21, 2006.
[12] Naimi T, Brewer B, Mokdad A, Serdula M, Denny C, Marks J. Binge Drinking Among U.S. Adults. JAMA 2003; 289:70–5.

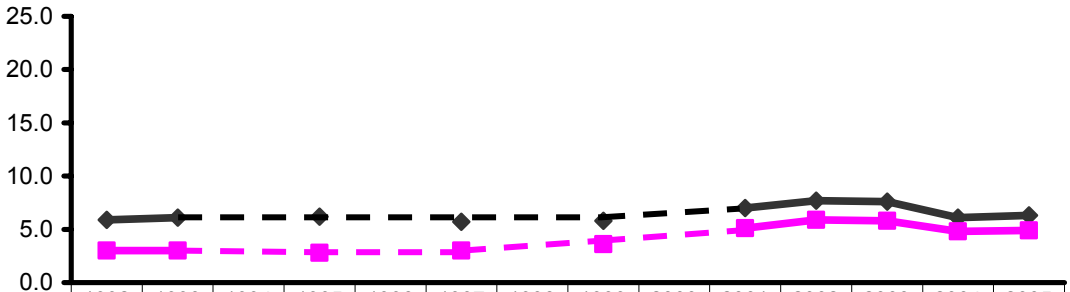
## Figure 3.4.1: Percentage of adults who report binge drinking, MA and US, 1990-2005




| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 18.5 | 20.1 | 20.0 | 19.2 | | 17.6 | | 18.2 | | 17.5 | | 18.1 | 18.3 | 18.3 | 17.0 | 15.7 |
| US median | 15.3 | 14.5 | 14.4 | 14.3 | | 14.1 | | 14.5 | | 14.9 | | 14.7 | 16.1 | | 14.9 | 14.4 |

Source: Massachusetts BRFSS 1990-2005
Note: Dotted line signifies years in which questions were not asked.

## Figure 3.4.2: Percentage of adults who report heavy drinking, MA and US, 1992-2005




| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ma Overall | 5.9 | 6.1 | | 6.2 | | 5.7 | | 5.8 | | 7.0 | 7.7 | 7.6 | 6.1 | 6.3 |
| US median | 3.0 | 3.0 | | 2.8 | | 3.0 | | 3.6 | | 5.1 | 5.9 | 5.8 | 4.8 | 4.9 |

Source: Massachusetts BRFSS 1990-2005
Note: Dotted line signifies years in which questions were not asked.

## TABLE 3.4 – ALCOHOL USE AMONG MASSACHUSETTS ADULTS, 2005

| | BINGE DRINKING | | HEAVY DRINKING** | |
|---|---|---|---|---|
| | % | 95% CI | % | 95% CI |
| OVERALL | 15.7 | 14.5 - 16.9 | 6.3 | 5.5 - 7.1 |
| GENDER | | | | |
| MALE | 23.9 | 21.7 - 26.1 | 7.4 | 6.0 - 8.8 |
| FEMALE | 8.4 | 7.4 - 9.5 | 5.4 | 4.5 - 6.2 |
| AGE GROUP | | | | |
| 18–24 | 28.6 | 22.7 - 34.4 | 12.2 | 7.8 - 16.7 |
| 25–34 | 23.8 | 20.3 - 27.3 | 5.8 | 4.1 - 7.5 |
| 35–44 | 18.1 | 15.7 - 20.5 | 6.0 | 4.6 - 7.5 |
| 45–54 | 14.3 | 12.1 - 16.5 | 6.1 | 4.6 - 7.6 |
| 55–64 | 8.0 | 6.2 - 9.9 | 6.4 | 4.8 - 7.9 |
| 65–74 | 5.0 | 3.3 - 6.7 | 4.4 | 2.8 - 5.9 |
| 75 AND OLDER | 2.6 | 1.3 - 4.0 | 2.8 | 1.2 - 4.3 |
| RACE-ETHNICITY* | | | | |
| WHITE | 16.1 | 14.8 - 17.5 | 6.8 | 5.9 - 7.6 |
| BLACK | 16.5 | 10.1 - 22.8 | 6.9 | 1.4 - 12.5 |
| HISPANIC | 14.3 | 9.6 - 19.1 | 3.2 | 1.3 - 5.1 |
| ASIAN | 9.5 | 4.3 - 14.6 | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 17.0 | 11.9 - 22.1 | 5.1 | 2.3 - 7.8 |
| HIGH SCHOOL | 16.7 | 14.3 - 19.1 | 6.5 | 5.0 - 8.0 |
| COLLEGE 1–3 YRS | 17.3 | 14.5 - 20.0 | 8.3 | 6.2 - 10.4 |
| COLLEGE 4+ YRS | 14.3 | 12.6 - 15.9 | 5.5 | 4.4 - 6.5 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 14.0 | 11.5 - 16.6 | 5.0 | 3.6 - 6.3 |
| $25,000–34,999 | 18.6 | 13.7 - 23.5 | 7.1 | 3.9 - 10.2 |
| $35,000–49,999 | 16.5 | 13.0 - 19.9 | 7.0 | 4.6 - 9.3 |
| $50,000–74,999 | 17.1 | 14.0 - 20.2 | 7.5 | 5.2 - 9.8 |
| $75,000+ | 18.1 | 15.9 - 20.4 | 7.3 | 5.7 - 8.8 |
| REGION | | | | |
| I–WESTERN | 16.4 | 13.2 - 19.6 | 7.0 | 4.7 - 9.4 |
| II–CENTRAL | 15.8 | 12.7 - 18.8 | 6.6 | 4.5 - 8.6 |
| III–NORTH EAST | 16.0 | 13.3 - 18.7 | 6.0 | 4.3 - 7.7 |
| IV–METRO WEST | 14.5 | 11.9 - 17.1 | 5.7 | 4.2 - 7.3 |
| V–SOUTH EAST | 15.3 | 12.5 - 18.1 | 6.3 | 4.5 - 8.2 |
| VI–BOSTON | 18.1 | 14.5 - 21.7 | 7.1 | 4.4 - 9.8 |

* White, Black, and Asian race categories refer to non-Hispanic

† Insufficient data

** Heavy drinking is defined as consumption of more than 60 drinks in the past month for men and more than 30 drinks for women. Reports published prior to 2001 have defined heavy drinking as 60 or more drinks for either men or women. As a result, rates presented in this report may not be comparable to rates published prior to 2001.

## Section 3.5: Overweight and Obesity

More than half of adults in Massachusetts were overweight or obese, costing Massachusetts an estimated 1.8 billion dollars in direct and indirect costs in 2003.[13] There are a variety of factors that play a role in obesity and overweight conditions such as unhealthy behaviors associated with eating and physical activity, and environmental and genetic factors. People with unhealthy body weight are at increased risk for developing illnesses such as high blood pressure, heart disease, diabetes, stroke, osteoarthritis, respiratory disease, and certain types of cancer.[14]

All respondents were asked to report their height and weight. Respondents were categorized based on their Body Mass Index (BMI), which equals weight in kilograms divided by height in meters squared. Using the Healthy People 2010 standards (HP2010), all adults with a BMI between 25.0 - 29.9 were classified as being overweight and adults with a BMI greater than or equal to 30.0 were classified as being obese. For example, a person who is 5'6" would be considered overweight at 155 pounds and obese at 186 pounds. Presented here is the percentage of respondents who were determined to be overweight or obese. Please note that the overweight category presented here includes respondents with a BMI larger than 25.0 (respondents classified as overweight or obese).

OVERWEIGHT (BMI greater than or equal to 25.0) (Table 3.5)

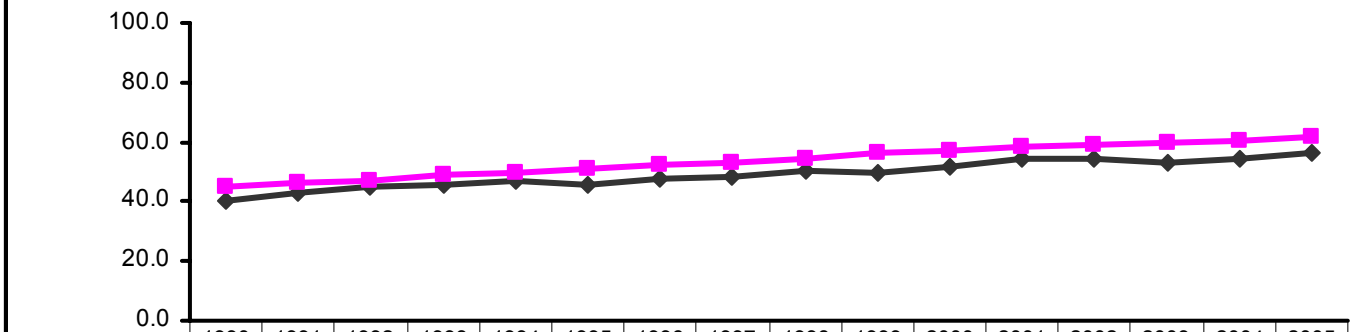
- 56% of Massachusetts adults were overweight.
- Men (66%) were more likely than women (47%) to be overweight.
- Adults ages 18-24 (39%) were less likely than all other age groups to be overweight.
- Asian adults (34%) were less likely than Black (69%), Hispanic (63%), or White (56%) adults to be overweight.
- From 1990 to 2005, the percentage of Massachusetts adults who were overweight increased from 40% to 56%, representing an average annual percentage increase of 2%. The national pattern follows this trend for overweight adults from 1990 to 2005 (Figure 3.5.1).

OBESITY (BMI greater than or equal to 30.0) (Table 3.5)

- 21% of Massachusetts adults were obese.
- Men (23%) were more likely than women (19%) to be obese.
- Black (33%) and Hispanic (27%) adults were more likely than White (20%) adults to be obese.
- Adults ages 75 and older (11%) were less likely than all other age groups to be obese.
- Those with less than a high school education (29%) were twice as likely as those with four or more years of college education (15%) to be obese.
- The Metro West region (17%) had the lowest reporting of obese adults.
- From 1990 to 2005, the overall percentage of adults who were obese had an average annual percentage increase of 5%. The Massachusetts trend is similar to the national data, with the Massachusetts obesity rate being consistently lower than the national estimate (Figure 3.5.2).

[13] Massachusetts Department of Public Health, Bureau of Family and Community Health: Nutrition and Physical Activity Unit. Available at http://www.mass.gov/dph/fch/nutrition/outlook.htm#overweight Accessed July 21, 2006.
[14] National Center for Chronic Disease Prevention and Health Promotion, Overweight and Obesity. Available at: http://www.cdc.gov/nccdphp/dnpa/obesity/index.htm Accessed July 21, 2006.

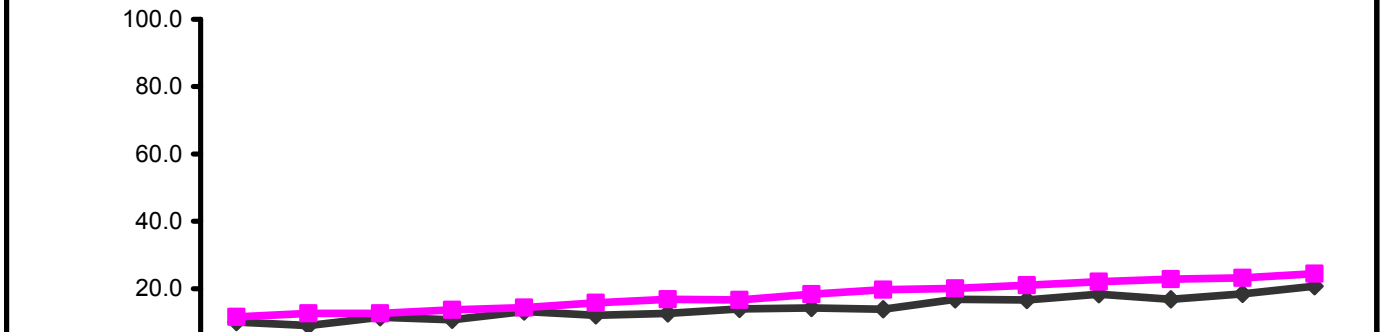
**Figure 3.5.1: Percentage of adults who are overweight or obese, MA and US, 1990-2005**




| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 40.1 | 43.1 | 45.3 | 45.6 | 47.3 | 45.8 | 47.9 | 48.2 | 50.1 | 49.6 | 51.9 | 54.4 | 54.6 | 53 | 54.5 | 56.1 |
| US Median | 44.7 | 46.2 | 47.2 | 49 | 49.8 | 51.3 | 52.2 | 52.9 | 54.6 | 56.5 | 56.8 | 58.2 | 59.1 | 60 | 60.3 | 61.5 |

Source: Massachusetts BRFSS 1990-2005

**Figure 3.5.2: Percentage of adults who are obese, MA and US, 1990-2005**




| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 10.1 | 9.0 | 11.5 | 10.7 | 13.2 | 12.1 | 12.6 | 14.0 | 14.3 | 13.9 | 16.8 | 16.6 | 18.3 | 16.8 | 18.4 | 20.7 |
| US median | 11.6 | 12.6 | 12.6 | 13.7 | 14.4 | 15.8 | 16.8 | 16.6 | 18.3 | 19.7 | 20.1 | 21.0 | 22.1 | 22.8 | 23.2 | 24.4 |

Source: Massachusetts BRFSS 1990-2005

| TABLE 3.5 – OVERWEIGHT AND OBESITY AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | OVERWEIGHT (BMI ≥ 25.0) | | OBESITY (BMI ≥ 30.0) | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 56.1 | 54.6 - 57.6 | 20.7 | 19.5 - 21.9 |
| GENDER | | | | |
| MALE | 65.7 | 63.4 - 67.9 | 22.7 | 20.7 - 24.6 |
| FEMALE | 46.7 | 44.8 - 48.7 | 18.8 | 17.3 - 20.3 |
| AGE GROUP | | | | |
| 18–24 | 38.6 | 32.1 - 45.0 | 17.9 | 12.7 - 23.0 |
| 25–34 | 52.8 | 48.8 - 56.7 | 21.2 | 17.9 - 24.4 |
| 35–44 | 56.1 | 53.0 - 59.1 | 19.4 | 17.0 - 21.8 |
| 45–54 | 65.0 | 62.0 - 67.9 | 26.0 | 23.2 - 28.7 |
| 55–64 | 61.5 | 58.3 - 64.8 | 24.6 | 21.8 - 27.4 |
| 65–74 | 64.4 | 60.4 - 68.5 | 21.7 | 18.1 - 25.2 |
| 75 AND OLDER | 53.5 | 49.2 - 57.7 | 10.8 | 8.4 - 13.3 |
| RACE-ETHNICITY* | | | | |
| WHITE | 55.6 | 54.0 - 57.3 | 19.9 | 18.6 - 21.2 |
| BLACK | 68.5 | 61.7 - 75.3 | 32.7 | 25.2 - 40.2 |
| HISPANIC | 63.0 | 57.0 - 69.0 | 27.4 | 22.4 - 32.5 |
| ASIAN | 33.7 | 23.1 - 44.3 | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 65.4 | 59.7 - 71.1 | 28.7 | 23.6 - 33.8 |
| HIGH SCHOOL | 60.7 | 57.7 - 63.7 | 24.0 | 21.5 - 26.5 |
| COLLEGE 1–3 YRS | 56.5 | 53.1 - 59.9 | 24.3 | 21.3 - 27.2 |
| COLLEGE 4+ YRS | 51.4 | 49.2 - 53.6 | 15.4 | 13.8 - 17.0 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 59.1 | 55.7 - 62.5 | 25.8 | 22.7 - 28.8 |
| $25,000–34,999 | 54.2 | 48.6 - 59.8 | 20.8 | 16.7 - 24.9 |
| $35,000–49,999 | 56.8 | 52.6 - 61.1 | 19.2 | 15.9 - 22.5 |
| $50,000–74,999 | 59.4 | 55.7 - 63.1 | 21.7 | 18.5 - 24.8 |
| $75,000+ | 56.3 | 53.6 - 59.0 | 20.6 | 18.3 - 22.9 |
| REGION | | | | |
| I–WESTERN | 60.8 | 56.7 - 64.8 | 23.3 | 19.9 - 26.7 |
| II–CENTRAL | 57.5 | 53.4 - 61.5 | 21.7 | 18.3 - 25.0 |
| III–NORTH EAST | 55.9 | 52.4 - 59.3 | 19.2 | 16.6 - 21.9 |
| IV–METRO WEST | 52.6 | 49.3 - 56.0 | 16.8 | 14.3 - 19.3 |
| V–SOUTH EAST | 57.8 | 54.4 - 61.1 | 23.6 | 20.6 - 26.6 |
| VI–BOSTON | 52.0 | 47.7 - 56.3 | 20.9 | 17.6 - 24.2 |

* White, Black, and Asian race categories refer to non-Hispanic.
† Insufficient data

## Section 3.6: Physical Activity

Regular physical activity reduces a person's risk for heart attack, colon cancer, diabetes, and high blood pressure, and helps to reduce the risk of stroke. Additionally, it helps to control weight, contributes to healthy bones, muscles, and joints, reduces falls among older adults, helps to relieve the pain of arthritis, reduces symptoms of anxiety and depression, and is associated with fewer hospitalizations, physician visits, and medications.[15]

All respondents were asked if they had participated in any physical activity, other than their regular job, in the past month. Respondents were also asked if they had participated in either moderate (activity that causes some increase in breathing and heart rate) or vigorous (activity that causes large increases in breathing or heart rate) physical activities. Adults who participated in 30 minutes of moderate physical activity 5 days per week or 20 minutes of vigorous activity 3 days per week were said to have engaged in regular physical activity. Presented here are the percentage of respondents who report any leisure time physical activity and the percentage of respondents who meet the recommendation for regular physical activity.

ANY LEISURE TIME PHYSICAL ACTIVITY (Table 3.6)

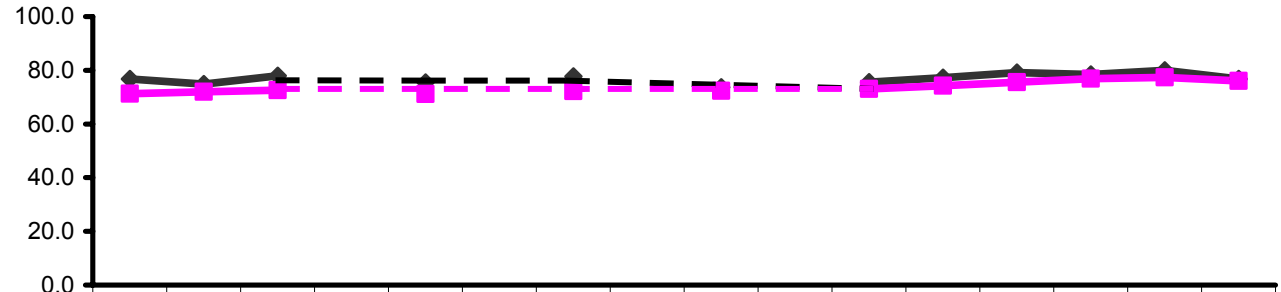
- 77% of Massachusetts adults reported any leisure time physical activity in the past month.
- Men (79%) were more likely to report any leisure time physical activity in the past month than women (75%).
- Adults ages 75 and older (61%) were less likely to report any leisure time physical activity than adults in all other age groups.
- White(79%) and Asian adults (80%) were more likely than Hispanic (54%) and Black (63%) adults to have participated in any leisure time physical activity in the past month.
- Participation in any leisure time physical activity increased with increasing education and increasing annual household income.
- The percentage of adults who participated in any leisure time physical activity in Massachusetts and in the US has remained in the range of 71% - 80% in 1990-2005 (Figure 3.6).

REGULAR PHYSICAL ACTIVITY IN THE PAST MONTH (Table 3.6)

- 53% of Massachusetts adults reported regular physical activity in the past month.
- The percentage of adults who reported regular physical activity decreased with increasing age, with adults ages 18-24 years (59%) being more likely than adults ages 75 years and older (38%) to report regular physical activity in the past month.
- White adults (54%) were more likely to report regular physical activity than Black (42%) and Hispanic (44%) adults.
- Regular physical activity increased with increasing education and increasing annual household income.

[15] National Center for Chronic Disease Prevention and Health Promotion, Physical Activity for Everyone: The Importance of Physical Activity. Available at: http://www.cdc.gov/nccdphp/dnpa/physical/importance/index.htm Accessed July, 21, 2006.

**Figure 3.6: Percentage of adults who participate in any leisure time physical activity, MA and US, 1990-2005**




| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 76.7 | 74.8 | 77.9 | | 75.4 | | 77.7 | | 73.6 | | 75.6 | 77.2 | 79.2 | 78.4 | 80.0 | 76.7 |
| US median | 71.3 | 72 | 72.6 | | 71.2 | | 72.2 | | 72.3 | | 73.1 | 74.3 | 75.6 | 76.9 | 77.3 | 76.1 |

Source: Massachusetts BRFSS 1990-2005
Note: Dotted line signifies years in which questions were not asked.

## TABLE 3.6 – PHYSICAL ACTIVITY AMONG MASSACHUSETTS ADULTS, 2005

| | ANY LEISURE TIME PHYSICAL ACTIVITY | | REGULAR PHYSICAL ACTIVITY | |
|---|---|---|---|---|
| | % | 95% CI | % | 95% CI |
| OVERALL | 76.7 | 75.5 - 77.9 | 52.6 | 51.1 - 54.2 |
| GENDER | | | | |
| MALE | 79.1 | 77.2 - 81.0 | 54.0 | 51.6 - 56.5 |
| FEMALE | 74.5 | 72.9 - 76.2 | 51.3 | 49.4 - 53.3 |
| AGE GROUP | | | | |
| 18–24 | 79.4 | 74.2 - 84.6 | 58.5 | 51.8 - 65.2 |
| 25–34 | 79.5 | 76.3 - 82.7 | 55.0 | 51.0 - 59.0 |
| 35–44 | 78.9 | 76.5 - 81.4 | 53.3 | 50.3 - 56.4 |
| 45–54 | 79.4 | 77.0 - 81.8 | 54.5 | 51.3 - 57.6 |
| 55–64 | 75.2 | 72.4 - 77.9 | 52.5 | 49.2 - 55.9 |
| 65–74 | 74.0 | 70.5 - 77.6 | 49.1 | 44.8 - 53.4 |
| 75 AND OLDER | 61.4 | 57.4 - 65.4 | 37.7 | 33.4 - 42.0 |
| RACE-ETHNICITY* | | | | |
| WHITE | 79.4 | 78.2 - 80.7 | 54.0 | 52.3 - 55.6 |
| BLACK | 63.0 | 55.5 - 70.6 | 41.7 | 33.9 - 49.5 |
| HISPANIC | 54.2 | 48.5 - 60.0 | 44.2 | 38.1 - 50.4 |
| ASIAN | 80.4 | 72.9 - 87.8 | 46.4 | 34.9 - 57.9 |
| EDUCATION | | | | |
| < HIGH SCHOOL | 48.5 | 42.8 - 54.2 | 38.1 | 32.1 - 44.1 |
| HIGH SCHOOL | 68.4 | 65.8 - 71.1 | 49.9 | 46.8 - 53.0 |
| COLLEGE 1–3 YRS | 77.4 | 74.8 - 79.9 | 51.2 | 47.8 - 54.7 |
| COLLEGE 4+ YRS | 86.9 | 85.5 - 88.3 | 57.6 | 55.5 - 59.8 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 60.9 | 57.7 - 64.2 | 41.3 | 37.8 - 44.8 |
| $25,000–34,999 | 70.4 | 65.4 - 75.3 | 54.5 | 49.0 - 60.0 |
| $35,000–49,999 | 76.5 | 73.1 - 79.8 | 54.5 | 50.3 - 58.8 |
| $50,000–74,999 | 81.4 | 78.5 - 84.2 | 54.6 | 50.8 - 58.4 |
| $75,000+ | 87.2 | 85.4 - 89.0 | 59.0 | 56.2 - 61.7 |
| REGION | | | | |
| I–WESTERN | 77.1 | 73.9 - 80.2 | 56.4 | 52.4 - 60.3 |
| II–CENTRAL | 75.6 | 72.3 - 79.0 | 51.5 | 47.3 - 55.6 |
| III–NORTH EAST | 75.0 | 72.2 - 77.9 | 50.6 | 47.1 - 54.1 |
| IV–METRO WEST | 81.4 | 78.9 - 84.0 | 54.7 | 51.4 - 58.1 |
| V–SOUTH EAST | 75.8 | 72.9 - 78.7 | 51.8 | 48.2 - 55.4 |
| VI–BOSTON | 72.1 | 68.3 - 75.9 | 49.5 | 45.2 - 53.9 |

* White, Black, and Asian race categories refer to non-Hispanic

## Section 3.7: Fruit and Vegetable Consumption

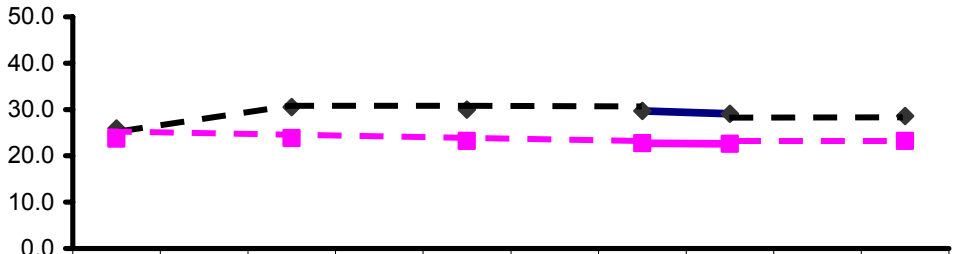
Increased consumption of fruits and vegetables is associated with improved health and a reduction in the risk of cancer and chronic diseases. The Centers for Disease Control and Prevention recommend consumption of 3-5 servings of fruit and 4-7 servings of vegetables per day.[16]

All respondents were asked about their consumption of fruits and vegetables. This included fruit juice, fruit, green salad, carrots, potatoes, and other vegetables. Presented here is the percentage of respondents who consumed five or more servings of fruits or vegetables per day.

FIVE OR MORE SERVINGS OF FRUIT AND VEGETABLE PER DAY (Table 3.7)

- 29% of Massachusetts adults reported consuming five or more servings of fruit and vegetables per day.
- Women (33%) were more likely than men (24%) to consume five or more servings of fruit and vegetables per day.
- Hispanic (20%) adults were less likely to consume five or more servings of fruit and vegetables per day than White (29%) or Asian (39%) adults.
- The percentage of adults who consumed five or more servings of fruit and vegetables per day increased with increasing education, with 16% of those with less than a high school education reporting that they consumed 5 or more servings of fruits and vegetables per day compared to 34% of those with 4 or more years of college.
- The percentage of adults who consumed five or more servings of fruit and vegetables per day increased with increasing income.
- The percentage of Massachusetts adults who consumed five or more fruit and vegetable servings per day remained slightly higher than the US estimate over the observed time period (Figure 3.7).

**Figure 3.7: Percentage of adults who have more than 5 fruit servings per day, MA and US,1996-2005**




| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|
| | 25.9 | | 30.5 | | 30.0 | | 29.7 | 29.0 | | 28.6 |
| US median | 23.7 | | 23.8 | | 23.2 | | 22.7 | 22.6 | | 23.2 |

Source: Massachusetts BRFSS 1996-2005
Note: Dotted line signifies years in which questions were not asked.

[16] National Center for Chronic Disease Prevention and Health Promotion, Nutrition for Everyone: Fruits and vegetables. Available at: http://www.cdc.gov/nccdphp/dnpa/nutrition/nutrition_for_everyone/fruits_vegetables/index.htm Accessed July 21, 2006.

## TABLE 3.7 – FRUIT AND VEGETABLE CONSUMPTION AMONG MASSACHUSETTS ADULTS, 2005

| | 5 OR MORE SERVINGS OF FRUIT OR VEGETABLES | |
|---|---|---|
| | % | 95% CI |
| OVERALL | 28.6 | 27.2 - 29.9 |
| GENDER | | |
| MALE | 24.0 | 22.0 - 26.1 |
| FEMALE | 32.7 | 30.9 - 34.5 |
| AGE GROUP | | |
| 18–24 | 25.3 | 19.6 - 31.0 |
| 25–34 | 26.3 | 22.9 - 29.8 |
| 35–44 | 28.0 | 25.3 - 30.7 |
| 45–54 | 28.3 | 25.5 - 31.0 |
| 55–64 | 30.8 | 27.8 - 33.9 |
| 65–74 | 30.1 | 26.3 - 33.9 |
| 75 AND OLDER | 33.7 | 29.7 - 37.7 |
| RACE-ETHNICITY* | | |
| WHITE | 29.2 | 27.7 - 30.6 |
| BLACK | 27.0 | 20.3 - 33.7 |
| HISPANIC | 20.4 | 15.8 - 24.9 |
| ASIAN | 38.5 | 27.3 - 49.7 |
| EDUCATION | | |
| < HIGH SCHOOL | 16.2 | 12.4 - 19.9 |
| HIGH SCHOOL | 23.9 | 21.3 - 26.6 |
| COLLEGE 1–3 YRS | 27.2 | 24.3 - 30.2 |
| COLLEGE 4+ YRS | 34.3 | 32.3 - 36.4 |
| HOUSEHOLD INCOME | | |
| <$25,000 | 23.2 | 20.4 - 26.1 |
| $25,000–34,999 | 25.9 | 21.0 - 30.8 |
| $35,000–49,999 | 27.0 | 23.3 - 30.8 |
| $50,000–74,999 | 27.2 | 24.0 - 30.3 |
| $75,000+ | 33.2 | 30.7 - 35.8 |
| REGION | | |
| I–WESTERN | 28.4 | 24.9 - 31.9 |
| II–CENTRAL | 29.3 | 25.5 - 33.0 |
| III–NORTH EAST | 26.4 | 23.5 - 29.3 |
| IV–METRO WEST | 33.0 | 29.9 - 36.1 |
| V–SOUTH EAST | 26.4 | 23.4 - 29.3 |
| VI–BOSTON | 26.4 | 22.9 - 30.0 |

* White, Black, and Asian race categories refer to non-Hispanic

## Section 3.8: Cholesterol Awareness

High blood cholesterol is a major modifiable risk factor for heart disease, which is the leading cause of death in the United States. Cholesterol is a soft, waxy substance found in the fat cells of the blood. Cholesterol can buildup in the walls of the body's arteries causing clogging that can lead to heart attack or stroke. Screening for high cholesterol is important in assuring that cholesterol is kept at a healthy level. Cholesterol levels can be lowered through dietary changes, increased physical activity, weight control, and/or drug therapy.[17]

All respondents were asked when they last had their cholesterol checked. Those who had their cholesterol checked were also asked if they had ever been told by a doctor, nurse, or other health professional that their cholesterol was high. Reported here is the percentage of adults who had their cholesterol checked in the past five years, and the percentage of those who had been told that they had high cholesterol.

CHOLESTEROL CHECKED IN PAST 5 YEARS (Table 3.8)

- Overall, 79% of Massachusetts adults reported that they had their cholesterol checked in the past 5 years.
- The percentage of adults who had their cholesterol checked in the past 5 years increased with increasing age for adults ages 18-74.
- White adults (83%) were more likely to report that they had their cholesterol checked within the past 5 years than Black (73%), Hispanic (54%), or Asian (54%) adults.
- The percentage of adults who had had their cholesterol checked within the past 5 years increased with increasing education from 58% among those with less than high school education to 86% among adults with four or more years of college education.
- Adults from the Boston (73%) and Western (74%) regions had the lowest reports of having their cholesterol checked in the past 5 years.
- From 1991 to 2005, the percentage of adults who had their cholesterol checked increased from 70% to 80%. This is an average annual increase of 1%.The national data showed similar patterns, but remained slightly lower than the Massachusetts trend (Figure 3.8.1).

HIGH CHOLESTEROL (Table 3.8)

- 36% of adults who had their cholesterol checked were told by a doctor, nurse, or other health professional that their cholesterol was high.
- Men (38%) were more likely than women (34%) to report that they had high cholesterol.
- The percentage of adults reporting that they had been told that they had high cholesterol increased with increasing age and began to decrease after age 75.
- Asian (22%) adults were less likely to report that they had high cholesterol than White (36%) or Hispanic (43%) adults.
- The number of adults reporting that they had ever been told that they had high cholesterol decreased with increasing education and annual household income.
- Since 1991, the percentage of adults who were told by a doctor, nurse or other health professional that their cholesterol was high was in the range 27% -36% (Figure 3.8.2).

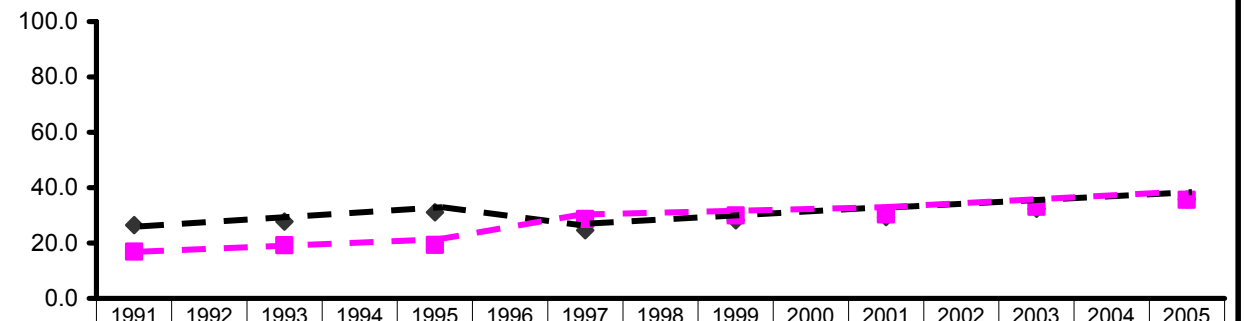
[17] National Center for Chronic Disease Prevention and Health Promotion, Division of Heart Disease and stroke Prevention: Fact Sheet. Available at: http://www.cdc.gov/dhdsp/library/fs_state_cholesterol.htm Accessed July, 21, 2006.

## Figure 3.8.1: Percentage of adults who had their cholesterol checked in the past 5 years, MA and US, 1991-2005


| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 69.8 | | 74.5 | | 75.7 | | 75.2 | | 76.5 | | 81.5 | | 81.7 | | 79.3 |
| US Median | 65.7 | | 67.3 | | 68.0 | | 69.1 | | 69.1 | | 72.5 | | 73.0 | | 73.0 |

Source: Massachusetts BRFSS 1991-2005
Note: Dotted line signifies years in which questions were not asked.

## Figure 3.8.2: Percentage of adults who were told by a health care provider that they had high cholesterol, MA and US, 1991-2005




| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 26.5 | | 27.8 | | 31.1 | | 24.6 | | 28.2 | | 29.4 | | 32.4 | | 35.7 |
| US Median | 16.9 | | 19.2 | | 19.3 | | 28.7 | | 30.0 | | 30.3 | | 33.1 | | 35.6 |

Source: Massachusetts BRFSS 1991-2005
Note: Dotted line signifies years in which questions were not asked.

| TABLE 3.8 – CHOLESTEROL AWARENESS AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | CHOLESTEROL CHECKED IN PAST 5 YEARS | | HIGH CHOLESTEROL** | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 79.3 | 77.9 - 80.7 | 35.7 | 34.3 - 37.2 |
| GENDER | | | | |
| MALE | 77.3 | 75.1 - 79.5 | 37.9 | 35.5 - 40.2 |
| FEMALE | 81.1 | 79.4 - 82.8 | 33.9 | 32.0 - 35.7 |
| AGE GROUP | | | | |
| 18–24 | 39.1 | 32.6 - 45.6 | 16.1 | 7.9 - 24.2 |
| 25–34 | 69.2 | 65.5 - 72.9 | 21.8 | 17.8 - 25.7 |
| 35–44 | 80.9 | 78.5 - 83.2 | 26.7 | 23.8 - 29.5 |
| 45–54 | 88.0 | 86.0 - 90.0 | 37.8 | 34.8 - 40.9 |
| 55–64 | 93.1 | 91.4 - 94.7 | 47.9 | 44.6 - 51.3 |
| 65–74 | 94.0 | 91.8 - 96.2 | 53.7 | 49.5 - 58.0 |
| 75 AND OLDER | 91.7 | 89.2 - 94.2 | 45.4 | 41.1 - 49.7 |
| RACE-ETHNICITY* | | | | |
| WHITE | 82.9 | 81.5 - 84.3 | 35.7 | 34.1 - 37.2 |
| BLACK | 73.2 | 65.5 - 80.9 | 36.3 | 28.5 - 44.1 |
| HISPANIC | 54.0 | 48.2 - 59.8 | 42.9 | 35.0 - 50.9 |
| ASIAN | 54.1 | 43.0 - 65.1 | 21.9 | 12.4 - 31.4 |
| EDUCATION | | | | |
| < HIGH SCHOOL | 57.5 | 51.6 - 63.5 | 43.9 | 37.5 - 50.4 |
| HIGH SCHOOL | 77.6 | 74.8 - 80.5 | 38.0 | 35.0 - 41.0 |
| COLLEGE 1–3 YRS | 76.0 | 72.8 - 79.3 | 36.1 | 33.0 - 39.2 |
| COLLEGE 4+ YRS | 85.9 | 84.3 - 87.6 | 33.4 | 31.3 - 35.5 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 72.9 | 69.6 - 76.1 | 41.3 | 37.8 - 44.9 |
| $25,000–34,999 | 69.0 | 63.7 - 74.4 | 35.9 | 30.1 - 41.7 |
| $35,000–49,999 | 81.1 | 77.3 - 85.0 | 37.0 | 32.9 - 41.1 |
| $50,000–74,999 | 83.5 | 80.4 - 86.6 | 37.1 | 33.3 - 40.8 |
| $75,000+ | 85.1 | 82.8 - 87.4 | 31.8 | 29.3 - 34.2 |
| REGION | | | | |
| I–WESTERN | 74.0 | 70.0 - 78.0 | 34.2 | 30.5 - 38.0 |
| II–CENTRAL | 76.6 | 72.7 - 80.5 | 35.9 | 32.0 - 39.8 |
| III–NORTH EAST | 79.2 | 76.0 - 82.4 | 34.5 | 31.3 - 37.8 |
| IV–METRO WEST | 84.8 | 82.1 - 87.5 | 38.4 | 35.1 - 41.8 |
| V–SOUTH EAST | 82.0 | 79.1 - 84.9 | 36.5 | 33.3 - 39.6 |
| VI–BOSTON | 73.3 | 69.1 - 77.5 | 31.2 | 27.2 - 35.2 |

* White, Black, and Asian race categories refer to non-Hispanic
** Analysis conducted among those who reported having their cholesterol checked

## Section 3.9: Hypertension Awareness

Blood pressure is the pressure of the blood on the walls of a person's arteries. If left untreated, high blood pressure or hypertension can cause the heart to overwork itself, leading to serious cardiovascular health issues, including heart attack, heart failure, and stroke. Management of hypertension may include both diet and medication.[18]

All respondents were asked if they had ever been told by a doctor, nurse, or other health professional that they had high blood pressure. Women who reported that they had high blood pressure only during pregnancy were excluded from the analysis. Individuals with high blood pressure were asked if they were currently taking medication for their high blood pressure. Presented here is the percentage of respondents who had ever been told they had high blood pressure and the percentage with high blood pressure who took medication for their high blood pressure.

HIGH BLOOD PRESSURE (Table 3.9)

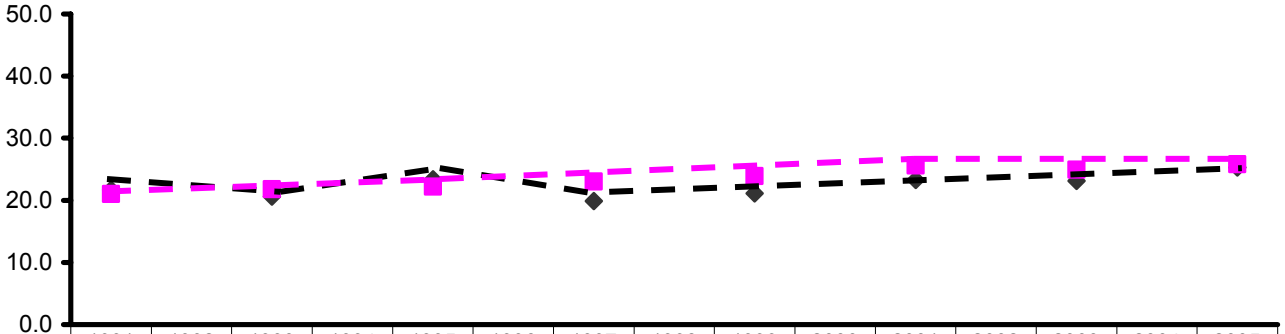
- 25% of Massachusetts adults reported that they had been told by a doctor, nurse, or other health professional that they had high blood pressure.
- The percentage of adults with high blood pressure increased with increasing age for adults age 25 and older.
- The percentage of adults reporting high blood pressure decreased with increasing annual household income and education.
- From 1991 to 2005, the percentage of adults who were told that they had high blood pressure was in the range of 20% to 25% (Figure 3.9).

TAKE MEDICINE FOR HIGH BLOOD PRESSURE (Table 3.9)

- Overall, 75% of those with high blood pressure reported taking medication for high blood pressure.
- Women (80%) were more likely than men (71%) to report taking medication for their high blood pressure.
- The percentage of adults who took medication for their high blood pressure increased with increasing age, with adults ages 75 or older (94%) being twice as likely to report using medication as those ages 35-44 (45%).

[18] National Center for Chronic Disease Prevention and Health Promotion, Division of Heart Disease and Stroke Prevention. Available at: http://www.cdc.gov/dhdsp/index.htm Accessed July, 24, 2006.

**Figure 3.9: Percentage of adults who were told by a health provider that they had high blood pressure, MA and US, 1991-2005**




| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ma Overall | 21.7 | | 20.6 | | 23.4 | | 19.9 | | 21.1 | | 23.3 | | 23.1 | | 25.3 |
| US median | 21.0 | | 21.8 | | 22.2 | | 23.0 | | 23.9 | | 25.6 | | 24.9 | | 25.8 |

Source: Massachusetts BRFSS 1991-2005
Note: Dotted line signifies years in which questions were not asked.

| TABLE 3.9 – HYPERTENSION AWARENESS AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | HIGH BLOOD PRESSURE | | TAKE MEDICINE FOR HIGH BLOOD PRESSURE** | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 25.3 | 24.1 - 26.5 | 75.3 | 72.7 - 77.9 |
| GENDER | | | | |
| MALE | 25.0 | 23.1 - 26.9 | 70.5 | 66.3 - 74.6 |
| FEMALE | 25.6 | 24.0 - 27.2 | 79.7 | 76.6 - 82.8 |
| AGE GROUP | | | | |
| 18–24 | 10.4 | 6.2 - 14.6 | † | - |
| 25–34 | 9.3 | 7.0 - 11.7 | † | - |
| 35–44 | 12.2 | 10.3 - 14.2 | 44.6 | 36.4 - 52.9 |
| 45–54 | 25.5 | 22.8 - 28.1 | 71.2 | 65.9 - 76.5 |
| 55–64 | 38.0 | 34.9 - 41.2 | 84.7 | 81.0 - 88.3 |
| 65–74 | 52.9 | 48.8 - 57.1 | 92.6 | 89.7 - 95.5 |
| 75 AND OLDER | 60.4 | 56.4 - 64.4 | 94.3 | 91.8 - 96.7 |
| RACE-ETHNICITY* | | | | |
| WHITE | 26.3 | 25.0 - 27.6 | 77.2 | 74.6 - 79.8 |
| BLACK | 29.8 | 22.9 - 36.6 | 71.7 | 56.5 - 87.0 |
| HISPANIC | 20.5 | 16.0 - 25.0 | 59.7 | 47.1 - 72.3 |
| ASIAN | † | - | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 30.3 | 25.6 - 35.1 | 81.4 | 75.5 - 87.2 |
| HIGH SCHOOL | 30.2 | 27.6 - 32.7 | 75.5 | 70.8 - 80.1 |
| COLLEGE 1–3 YRS | 25.6 | 22.9 - 28.3 | 72.9 | 66.9 - 78.9 |
| COLLEGE 4+ YRS | 21.3 | 19.6 - 23.0 | 74.9 | 70.7 - 79.0 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 34.6 | 31.5 - 37.6 | 78.1 | 73.8 - 82.5 |
| $25,000–34,999 | 25.3 | 21.3 - 29.4 | 78.5 | 71.6 - 85.3 |
| $35,000–49,999 | 24.7 | 21.3 - 28.0 | 75.2 | 68.8 - 81.6 |
| $50,000–74,999 | 23.7 | 20.4 - 27.0 | 73.1 | 64.6 - 81.6 |
| $75,000+ | 20.4 | 18.3 - 22.5 | 68.3 | 62.4 - 74.2 |
| REGION | | | | |
| I–WESTERN | 26.3 | 23.0 - 29.6 | 76.0 | 69.1 - 82.9 |
| II–CENTRAL | 25.3 | 21.9 - 28.7 | 74.0 | 66.7 - 81.2 |
| III–NORTH EAST | 22.8 | 20.2 - 25.4 | 78.6 | 73.3 - 83.9 |
| IV–METRO WEST | 25.1 | 22.3 - 27.8 | 73.5 | 67.4 - 79.5 |
| V–SOUTH EAST | 28.9 | 26.0 - 31.7 | 76.5 | 71.5 - 81.6 |
| VI–BOSTON | 21.9 | 18.7 - 25.0 | 71.3 | 63.8 - 78.8 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient Data
** Analysis was conducted among those who reported that they had high blood pressure.

## Section 3.10: Flu Vaccine and Pneumonia Vaccine

Influenza or the flu is a contagious respiratory illness caused by the influenza viruses. It can cause mild to severe illness and can even lead to death. Every year in the United States, about 5-20% of the population gets the flu, more than 200,000 people are hospitalized from flu complications, and about 36,000 people die.[19] Streptococcus pneumonia is a bacterial pathogen that causes illness and sometimes death in young children, the elderly, and persons who have certain medical conditions. Adults 65 years of age or older and children less than 2 years of age are at increased risk for pneumococcal infection. In Massachusetts, flu and pneumonia were the 5th leading causes of death in 2004 among adults 65 and older. [20]

All respondents were asked if they had an influenza vaccine (flu shot) or nasal flu spray (flu mist) within the past 12 months. In addition, all respondents were asked if they had ever received a pneumonia vaccine. Presented here are the percentages of respondents receiving a flu vaccine in the past year for ages 50-64 years and ages 65 years and older, and the percentage of adults, ages 65 and older, reporting that they had ever had a pneumonia vaccination.

FLU VACCINE IN PAST YEAR, AGES 50 AND OLDER (Table 3.10)

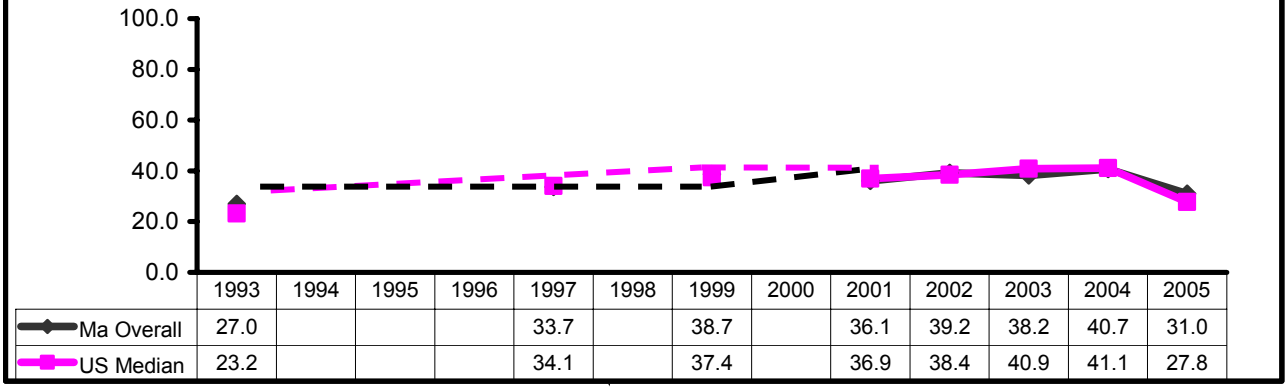
- 31% of Massachusetts adults ages 50-64 years reported that they had received a flu vaccine in the past year.
- 70% percent of adults age 65 and older reported that they had received a flu vaccine in the past year.
- The percentage of adults ages 50-64 who have had a flu vaccine in the past year has increased from 27% in 1993 to 41% in 2004 and decreased to 31% in 2005. This represents an annual average change of 3.5% from 1993 until the year 2004. The national data followed a similar trend (Figure 3.10.1).
- The percentage receiving a flu vaccine among adults age 65 and older increased annually by 7.8%, from 49% in 1993 to 66% in 1997. The percentage remained in the range of 66% to 75% from 1997 to 2005. The national data followed a similar trend (Figure 3.10.2).

EVER HAD PNEUMONIA VACCINE, AGES 65 AND OLDER (Table 3.7)

- 65% of Massachusetts adults age 65 and older reported that they had ever received a pneumonia vaccine.
- 68% of women and 59% of men ages 65 and older reported that they had ever received a pneumonia vaccine.
- Adults ages 75 and older (73%) were more likely to have had a pneumonia vaccine than adults ages 50-64 (59%).
- Reports of having ever received a pneumonia vaccine were lowest among those with an education level of less than high school (50%).
- The percentage of adults age 65 and older who have had a pneumonia vaccine in the past year has increased from 22% in 1993 to 54% in 1997 and than remained in the range 54% to 65% from 1997 to 2005 (Figure 3.10.3).

[19] Center for Disease Control and Prevention. Key Facts about Influenza and the Influenza Vaccine. Available at: http://www.cdc.gov/flu/keyfacts.htm Accessed July 21 2006.
[20] Massachusetts Department of Public Health, Division of Research and Epidemiology.. 2004 Death Report.. Available at: http://www.mass.gov/Eeohhs2/docs/dph/research_epi/death_report_2004.pdf Accessed July 27, 2006.

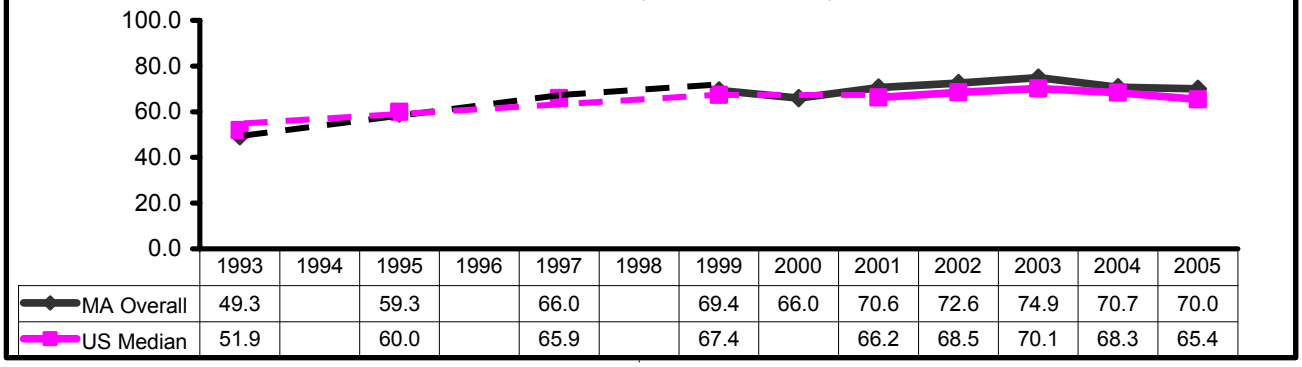
## Figure 3.10.1: Percentage of adults ages 50-64 who have had a flu vaccine, MA and US,1993-2005




| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ma Overall | 27.0 | | | | 33.7 | | 38.7 | | 36.1 | 39.2 | 38.2 | 40.7 | 31.0 |
| US Median | 23.2 | | | | 34.1 | | 37.4 | | 36.9 | 38.4 | 40.9 | 41.1 | 27.8 |

Source: Massachusetts BRFSS 1993-2005
Note: Dotted line signifies years in which questions were not asked. US medians present flu shot percentage only, nasal spray was not included.

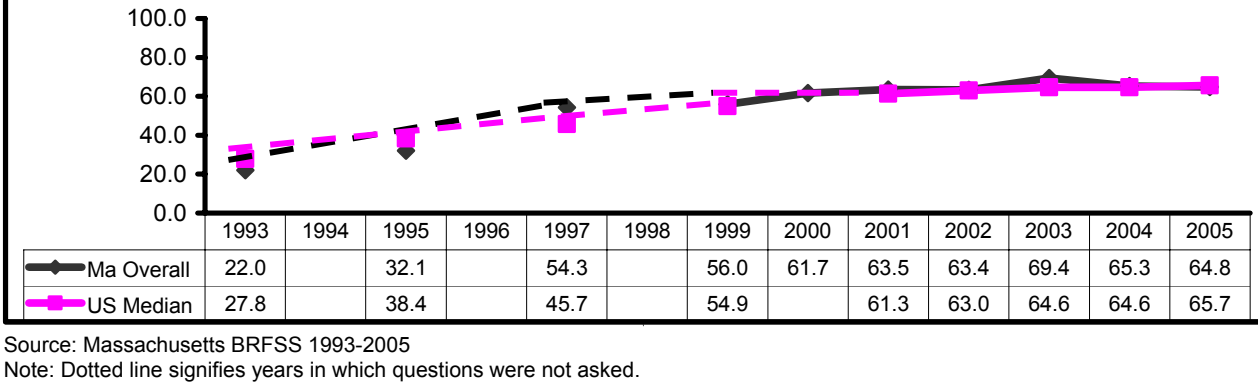
## Figure 3.10.2: Percentage of adults ages 65 and older who have had a flu vaccine, MA and US, 1993-2005




| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 49.3 | | 59.3 | | 66.0 | | 69.4 | 66.0 | 70.6 | 72.6 | 74.9 | 70.7 | 70.0 |
| US Median | 51.9 | | 60.0 | | 65.9 | | 67.4 | | 66.2 | 68.5 | 70.1 | 68.3 | 65.4 |

Source: Massachusetts BRFSS 1993-2005
Note: Dotted line signifies years in which questions were not asked. US medians present flu shot percentage only, nasal spray was not included.

## Figure 3.10.3: Percentage of adults ages 65 and older who have had a pneumonia vaccine, MA and US, 1993-2005




| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ma Overall | 22.0 | | 32.1 | | 54.3 | | 56.0 | 61.7 | 63.5 | 63.4 | 69.4 | 65.3 | 64.8 |
| US Median | 27.8 | | 38.4 | | 45.7 | | 54.9 | | 61.3 | 63.0 | 64.6 | 64.6 | 65.7 |

Source: Massachusetts BRFSS 1993-2005
Note: Dotted line signifies years in which questions were not asked.

## TABLE 3.10– FLU VACCINE AND PNEUMONIA VACCINE AMONG MASSACHUSETTS ADULTS, AGES 50 YEARS AND OLDER, 2005

| | FLU VACCINE IN PAST YEAR | | | | | | EVER HAD PNEUMONIA VACCINE | | |
|---|---|---|---|---|---|---|---|---|---|
| | AGES 50-64 | | | AGES 65+ | | | AGES 65+ | | |
| | % | 95% CI | | % | 95% CI | | % | 95% CI | |
| OVERALL | 31.0 | 28.7 | 33.4 | 70.0 | 67.3 | 72.7 | 64.8 | 61.9 | 67.7 |
| GENDER | | | | | | | | | |
| MALE | 27.7 | 24.2 | 31.3 | 72.3 | 68.1 | 76.5 | 59.4 | 54.5 | 64.3 |
| FEMALE | 34.3 | 31.2 | 37.4 | 68.5 | 65.0 | 71.9 | 68.4 | 64.9 | 72.0 |
| AGE GROUP | | | | | | | | | |
| 50–64 | 31.0 | 28.7 | 33.4 | | | | | | |
| 65–74 | | | | 61.4 | 57.3 | 65.4 | 56.5 | 52.2 | 60.8 |
| 75 AND OLDER | | | | 78.1 | 74.7 | 81.5 | 72.7 | 68.9 | 76.5 |
| RACE-ETHNICITY* | | | | | | | | | |
| WHITE | 30.6 | 28.2 | 33.1 | 71.1 | 68.3 | 73.9 | 66.7 | 63.7 | 69.7 |
| BLACK | 32.3 | 19.7 | 45.0 | 41.5 | 21.5 | 61.5 | 39.9 | 19.0 | 60.7 |
| HISPANIC | 38.3 | 26.4 | 50.2 | 61.9 | 47.2 | 76.6 | 32.0 | 18.0 | 46.0 |
| ASIAN | † | - | | † | - | | † | - | |
| EDUCATION | | | | | | | | | |
| < HIGH SCHOOL | 27.7 | 17.4 | 38.0 | 61.2 | 53.4 | 69.0 | 49.5 | 41.1 | 57.9 |
| HIGH SCHOOL | 29.5 | 24.9 | 34.2 | 69.1 | 64.5 | 73.6 | 70.4 | 65.7 | 75.1 |
| COLLEGE 1–3 YRS | 29.8 | 25.1 | 34.6 | 65.3 | 58.8 | 71.8 | 67.1 | 60.6 | 73.5 |
| COLLEGE 4+ YRS | 32.7 | 29.1 | 36.3 | 76.7 | 72.4 | 81.0 | 63.1 | 57.9 | 68.3 |
| HOUSEHOLD INCOME | | | | | | | | | |
| <$25,000 | 36.1 | 30.3 | 41.8 | 67.0 | 62.4 | 71.6 | 66.8 | 62.0 | 71.5 |
| $25,000–34,999 | 39.0 | 30.2 | 47.8 | 72.9 | 65.2 | 80.6 | 62.5 | 53.7 | 71.3 |
| $35,000–49,999 | 28.3 | 21.4 | 35.2 | 68.7 | 60.4 | 77.0 | 70.7 | 62.3 | 79.1 |
| $50,000–74,999 | 30.9 | 25.4 | 36.4 | 73.0 | 64.0 | 82.1 | 67.5 | 58.3 | 76.7 |
| $75,000+ | 30.7 | 26.5 | 34.8 | 76.4 | 68.3 | 84.4 | 58.6 | 48.9 | 68.4 |
| REGION | | | | | | | | | |
| I–WESTERN | 34.3 | 28.1 | 40.6 | 65.5 | 58.4 | 72.7 | 68.6 | 61.3 | 75.8 |
| II–CENTRAL | 27.9 | 21.8 | 33.9 | 62.9 | 54.6 | 71.1 | 66.1 | 57.7 | 74.6 |
| III–NORTH EAST | 25.1 | 20.1 | 30.1 | 76.1 | 70.7 | 81.6 | 57.4 | 50.2 | 64.6 |
| IV–METRO WEST | 31.6 | 26.2 | 36.9 | 77.1 | 71.9 | 82.3 | 68.0 | 61.9 | 74.1 |
| V–SOUTH EAST | 33.8 | 28.7 | 38.9 | 63.5 | 57.6 | 69.4 | 64.4 | 58.5 | 70.3 |
| VI–BOSTON | 35.1 | 27.6 | 42.7 | 72.4 | 64.4 | 80.3 | 64.5 | 55.3 | 73.7 |

* White, Black, and Asian race categories refer to non-Hispanic*
† Insufficient Data

# SECTION 4: CHRONIC HEALTH CONDITIONS

## Section 4.1: Diabetes

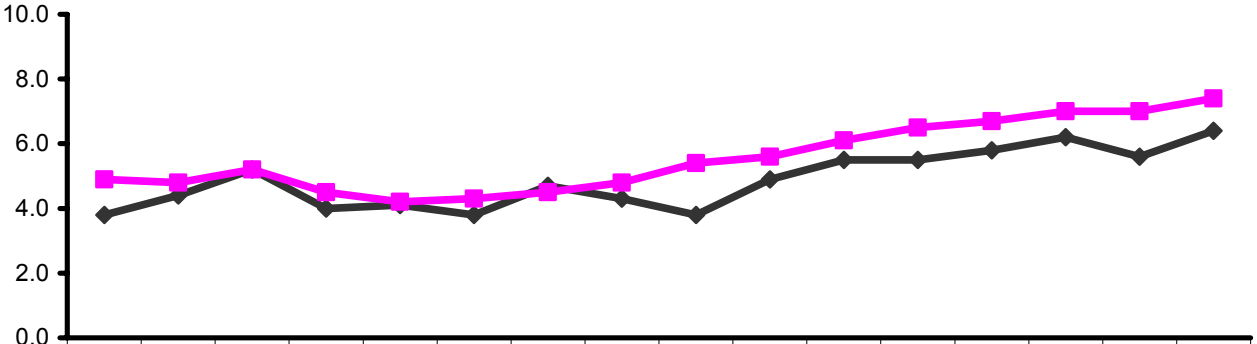
Diabetes is the eighth leading cause of death in Massachusetts. However, diabetes is likely to be underreported as the underlying cause of death and instead, deaths may have been attributed to the complications caused by diabetes including heart disease, stroke, and kidney failure. In the United States, 65% of deaths among those with diabetes are attributed to heart disease and stroke. In 2002, the economic burden of diabetes in the United States surpassed 132 billion dollars in indirect costs, including time lost from work and direct costs including medical care and hospitalizations. Risks include older age, obesity, family and/or prior history of diabetes, physical inactivity, and race and ethnicity.[21]

All respondents were asked if they had ever been told by a doctor that they had diabetes. Women who reported that they had diabetes only during pregnancy (gestational diabetes) were excluded from this analysis. Presented here is the percentage of respondents who reported that they had ever been told by a doctor that they had diabetes.

DIABETES (Table 4.1)

- 6% of Massachusetts adults reported that they had been told by a doctor that they had diabetes.
- Similar percentages of men (7%) and women (6%) reported that they had diabetes.
- Adults age 45 and older were more likely to report that they had diabetes than adults ages 18 to 44.
- The percentage of adults with diabetes decreased with increasing education. Those with four or more years of college (4%) were less likely to report that they had diabetes than those with all other levels of education.
- The percentage of adults with diabetes was the highest among adults with an annual household income of less than $25,000 (12%).
- Between 1990 and 2005, the percentage of adults reporting diabetes increased from 4% to 6%. This is an average annual percentage change of 3%. Trends from Massachusetts and the US follow similar patterns (Figure 4.1).

**Figure 4.1: Percentage of adults who have diabetes, MA and US, 1990-2005**




| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 3.8 | 4.4 | 5.2 | 4 | 4.1 | 3.8 | 4.7 | 4.3 | 3.8 | 4.9 | 5.5 | 5.5 | 5.8 | 6.2 | 5.6 | 6.4 |
| US Median | 4.9 | 4.8 | 5.2 | 4.5 | 4.2 | 4.3 | 4.5 | 4.8 | 5.4 | 5.6 | 6.1 | 6.5 | 6.7 | 7.0 | 7.0 | 7.4 |

Source: Massachusetts BRFSS 1990-2005

[21] National Institute of Diabetes and Digestive and Kidney Diseases. National Diabetes Information Clearinghouse (NDIC). Diabetes Overview. Available at: http://diabetes.niddk.nih.gov/dm/pubs/overview/index.htm. Accessed July 24, 2006.

| TABLE 4.1 – DIABETES AMONG MASSACHUSETTS ADULTS, 2005 | | |
|---|---|---|
| | DIABETES | |
| | % | 95% CI |
| OVERALL | 6.4 | 5.7 - 7.0 |
| GENDER | | |
| MALE | 6.8 | 5.8 - 7.8 |
| FEMALE | 5.9 | 5.1 - 6.7 |
| AGE GROUP | | |
| 18–24 | 1.6 | 0.0 - 3.4 |
| 25–34 | 1.3 | 0.6 - 2.0 |
| 35–44 | 2.7 | 1.7 - 3.8 |
| 45–54 | 7.3 | 5.7 - 8.9 |
| 55–64 | 11.8 | 9.8 - 13.8 |
| 65–74 | 15.3 | 12.4 - 18.2 |
| 75 AND OLDER | 12.5 | 9.9 - 15.1 |
| RACE-ETHNICITY* | | |
| WHITE | 6.0 | 5.4 - 6.7 |
| BLACK | 10.0 | 6.1 - 13.9 |
| HISPANIC | 7.4 | 5.4 - 9.5 |
| ASIAN | † | - |
| EDUCATION | | |
| < HIGH SCHOOL | 10.4 | 7.7 - 13.2 |
| HIGH SCHOOL | 7.8 | 6.4 - 9.2 |
| COLLEGE 1–3 YRS | 7.4 | 5.9 - 8.9 |
| COLLEGE 4+ YRS | 4.1 | 3.4 - 4.8 |
| HOUSEHOLD INCOME | | |
| <$25,000 | 11.5 | 9.7 - 13.4 |
| $25,000–34,999 | 6.7 | 4.3 - 9.0 |
| $35,000–49,999 | 5.6 | 4.0 - 7.2 |
| $50,000–74,999 | 5.7 | 4.0 - 7.3 |
| $75,000+ | 3.7 | 2.8 - 4.6 |
| REGION | | |
| I–WESTERN | 6.7 | 5.2 - 8.1 |
| II–CENTRAL | 7.3 | 5.2 - 9.4 |
| III–NORTH EAST | 6.0 | 4.7 - 7.3 |
| IV–METRO WEST | 5.6 | 4.3 - 6.9 |
| V–SOUTH EAST | 6.7 | 5.3 - 8.1 |
| VI–BOSTON | 6.1 | 4.4 - 7.7 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient Data

## Section 4.2: Asthma

Asthma is a chronic disease that affects the lungs. It causes repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing. Important asthma triggers include, but are not limited to, environmental tobacco smoke, dust mites, and outdoor air pollution. Asthma can be controlled by taking certain medications or by avoiding environmental triggers.[22]

All respondents were asked if they had ever been told by a doctor, nurse, or other health care professional that they had asthma. Those who reported ever having asthma, were then asked if they currently have asthma. Reported here are the percentages of respondents who reported ever having asthma and those who reported currently having asthma.

EVER HAD ASTHMA (Table 4.2)

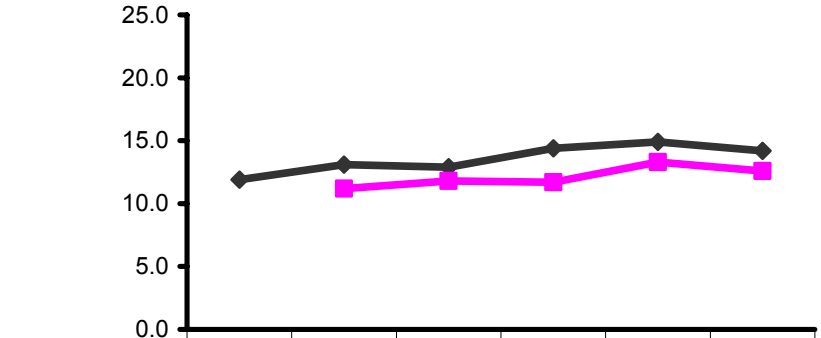
- 14% of Massachusetts adults reported that they had ever been told that they had asthma.
- Women (17%) were more likely to report ever having asthma than men (11%).
- Adults ages 18 to 24 (18%) were more likely to report ever having asthma than adults age 75 and older (10%).
- Adults with an annual household income of less than $25,000 (19%) were more likely than adults with an annual household income of $75,000 or more (13%) to report that they had ever had asthma.
- The percentage of adults who reported that they had ever been told they had asthma was 12% in 2000 and 14% in 2005. Massachusetts data were slightly higher than national data over the years 2001-2005 (Figure 4.2.1).

CURRENTLY HAVE ASTHMA (Table 4.2)

- 10% of Massachusetts adults reported that they currently have asthma.
- Women (12%) were more likely than men (7%) to report currently having asthma.
- Adults with less than a high school education (14%) had the highest reporting of currently having asthma.
- Adults with an annual household income of less than $25,000 (14%) were more likely than adults with an annual household income of $75,000 or more (8%) to report that they currently had asthma.
- The percentage of adults who currently have asthma has been in the range of 9% to 10% from 2000 to 2005. Massachusetts data were slightly higher than national data over the period of time 2001-2005 (Figure 4.2.2).

[22] National Center for Chronic Disease Prevention and Health Promotion, National Center for Environmental Health: Asthma. Available at: http://www.cdc.gov/asthma/faqs.htm Accessed July 24, 2006.

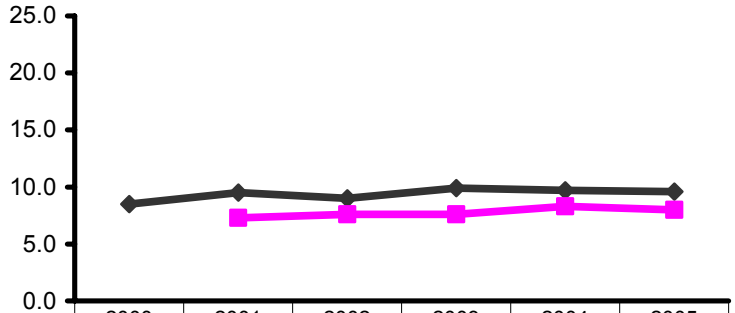
**Figure 4.2.1: Percentage of adults who have ever had asthma, MA and US, 2000-2005**




| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|
| Ma Overall | 11.9 | 13.1 | 12.9 | 14.4 | 14.9 | 14.2 |
| US median | | 11.2 | 11.8 | 11.7 | 13.3 | 12.6 |

Source: Massachusetts BRFSS 2000-2005

**Figure 4.2.2: Percentage of adults who currently have asthma, MA and US, 2000-2005**




| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|
| Ma Overall | 8.5 | 9.5 | 9.0 | 9.9 | 9.7 | 9.6 |
| US median | | 7.3 | 7.6 | 7.6 | 8.3 | 8.0 |

Source: Massachusetts BRFSS 2000-2005

| TABLE 4.2 – ASTHMA AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | EVER HAD ASTHMA | | CURRENTLY HAVE ASTHMA | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 14.2 | 13.1 - 15.2 | 9.6 | 8.8 - 10.5 |
| GENDER | | | | |
| MALE | 11.4 | 9.9 - 12.8 | 6.8 | 5.6 - 8.0 |
| FEMALE | 16.7 | 15.2 - 18.1 | 12.2 | 10.9 - 13.5 |
| AGE GROUP | | | | |
| 18–24 | 18.0 | 13.1 - 22.8 | 11.1 | 6.9 - 15.3 |
| 25–34 | 16.4 | 13.6 - 19.2 | 11.3 | 8.9 - 13.6 |
| 35–44 | 13.0 | 10.9 - 15.0 | 9.2 | 7.4 - 10.9 |
| 45–54 | 13.5 | 11.5 - 15.5 | 9.4 | 7.8 - 11.1 |
| 55–64 | 15.5 | 13.2 - 17.9 | 10.4 | 8.4 - 12.3 |
| 65–74 | 11.5 | 9.2 - 13.8 | 8.4 | 6.4 - 10.4 |
| 75 AND OLDER | 10.0 | 7.3 - 12.7 | 6.9 | 4.6 - 9.3 |
| RACE-ETHNICITY* | | | | |
| WHITE | 14.3 | 13.1 - 15.4 | 9.7 | 8.8 - 10.7 |
| BLACK | 12.2 | 8.3 - 16.1 | 8.3 | 5.0 - 11.5 |
| HISPANIC | 16.4 | 12.5 - 20.4 | 10.3 | 6.9 - 13.7 |
| ASIAN | † | - | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 20.3 | 15.3 - 25.3 | 14.1 | 9.3 - 18.8 |
| HIGH SCHOOL | 14.1 | 12.1 - 16.2 | 9.7 | 8.0 - 11.4 |
| COLLEGE 1–3 YRS | 14.7 | 12.5 - 16.9 | 10.2 | 8.3 - 12.0 |
| COLLEGE 4+ YRS | 12.7 | 11.3 - 14.1 | 8.4 | 7.2 - 9.5 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 18.6 | 15.9 - 21.3 | 14.1 | 11.6 - 16.7 |
| $25,000–34,999 | 12.4 | 9.2 - 15.6 | 9.3 | 6.4 - 12.1 |
| $35,000–49,999 | 14.8 | 11.9 - 17.7 | 10.7 | 8.2 - 13.2 |
| $50,000–74,999 | 12.1 | 9.7 - 14.5 | 7.6 | 5.7 - 9.6 |
| $75,000+ | 13.0 | 11.3 - 14.8 | 8.1 | 6.8 - 9.4 |
| REGION | | | | |
| I–WESTERN | 16.6 | 13.8 - 19.4 | 10.9 | 8.6 - 13.3 |
| II–CENTRAL | 16.2 | 13.1 - 19.3 | 11.9 | 9.0 - 14.7 |
| III–NORTH EAST | 13.3 | 11.1 - 15.4 | 7.8 | 6.2 - 9.3 |
| IV–METRO WEST | 12.6 | 10.4 - 14.8 | 8.1 | 6.2 - 9.9 |
| V–SOUTH EAST | 13.8 | 11.5 - 16.1 | 10.7 | 8.7 - 12.8 |
| VI–BOSTON | 13.5 | 10.7 - 16.4 | 9.2 | 6.9 - 11.5 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient Data

## Section 4.3: Arthritis

Arthritis is a condition which includes inflammation of a joint or the surrounding connective tissue. Although age, gender, and genetics play a large role in a person's risk for arthritis, many modifiable factors can increase an individual's risk for developing arthritis, including overweight and obesity, joint injuries, infection, and occupation. According to the CDC, approximately 67 million Americans age 18 or older will have doctor-diagnosed arthritis by the year 2030.[23]

All respondents were asked if they had ever been told by a doctor or other health professional that they have some form of arthritis. Presented here is the percentage of adults ages 18 years and older who reported that they had been told by a doctor or other health professional that they had arthritis. (Note: The age range of arthritis presented in this report is extended compared to previous years. Therefore, estimates of arthritis published in this report are not comparable with estimates published in years prior to 2005).

DOCTOR DIAGNOSED ARTHRITIS (Table 4.3)

- Overall, 26% of Massachusetts adults age 18 and older reported that they had been told by a doctor or other health professional that they had arthritis.
- Women (31%) were more likely than men (21%) to report having ever been told that they had arthritis.
- Arthritis increased with increasing age from 5% among adults ages 18-24 to 59% among adults age 75 and older.
- White (28%) adults were more likely to report having arthritis than Hispanic (16%) adults.
- Arthritis decreased with increasing annual household income, with 36% of adults with less than $25,000 of annual household income reporting that they had ever been told that they had arthritis, and 20% of adults with the annual household income of more than $75,000 reporting that they had ever been told by a health care professional that they have arthritis.
- Adults from the Boston region (17%) were more likely than all other regions to report that they had ever been told by a health care professional that they have arthritis.

LIMITATIONS DUE TO ARTHRITIS (Table 4.3)

- Overall, 9% of Massachusetts adults ages 18 and older reported that they had limitations in their usual activities due to arthritis.
- Women (12%) were more likely than men (7%) to report having limitations due to arthritis.
- Limitations in usual activities due to arthritis increased with increasing age from 3% among adults 18-24 years of age to 21% among adults 75 years of age and older.
- Limitations in usual activities due to arthritis symptoms decreased with increasing annual household income, with 18% of adults with less than $25,000 in annual household income reporting that they had limitations, and 5% of adults with an annual household income of more than $75,000 reporting that they had been limited due to arthritis symptoms.

[23] National Center for Chronic Disease Prevention and Health Promotion, Arthritis Related Statistics. Available at: http://www.cdc.gov/arthritis/data_statistics/arthritis_related_statistics.htm Accessed July 24, 2006.

| TABLE 4.3 – ARTHRITIS AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | DOCTOR DIAGNOSED ARTHRITIS | | LIMITATIONS DUE TO ARTHRITIS | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 25.9 | 24.7 - 27.1 | 9.3 | 8.6 - 10.1 |
| GENDER | | | | |
| MALE | 20.8 | 19.1 - 22.5 | 6.6 | 5.6 - 7.6 |
| FEMALE | 30.6 | 28.9 - 32.3 | 11.8 | 10.6 - 13.0 |
| AGE GROUP | | | | |
| 18–24 | 5.3 | 2.3 - 8.3 | 2.5 | 0.2 - 4.9 |
| 25–34 | 8.3 | 6.3 - 10.3 | 2.5 | 1.4 - 3.7 |
| 35–44 | 16.3 | 14.1 - 18.6 | 6.3 | 4.8 - 7.8 |
| 45–54 | 28.7 | 26.0 - 31.4 | 10.6 | 8.8 - 12.3 |
| 55–64 | 42.3 | 39.1 - 45.5 | 14.6 | 12.4 - 16.7 |
| 65–74 | 49.7 | 45.5 - 53.8 | 17.1 | 14.2 - 20.1 |
| 75 AND OLDER | 58.7 | 54.5 - 62.8 | 20.9 | 17.6 - 24.2 |
| RACE-ETHNICITY* | | | | |
| WHITE | 28.0 | 26.7 - 29.4 | 9.7 | 8.9 - 10.6 |
| BLACK | 21.7 | 15.2 - 28.2 | 8.8 | 4.0 - 13.6 |
| HISPANIC | 15.8 | 12.1 - 19.5 | 7.8 | 4.8 - 10.8 |
| ASIAN | † | - | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 27.0 | 22.6 - 31.5 | 12.0 | 8.7 - 15.3 |
| HIGH SCHOOL | 31.0 | 28.5 - 33.6 | 11.1 | 9.4 - 12.8 |
| COLLEGE 1–3 YRS | 26.4 | 23.8 - 29.1 | 9.5 | 8.0 - 11.1 |
| COLLEGE 4+ YRS | 22.5 | 20.8 - 24.2 | 7.8 | 6.7 - 8.8 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 36.0 | 32.9 - 39.1 | 17.6 | 15.1 - 20.1 |
| $25,000–34,999 | 26.4 | 22.3 - 30.4 | 11.2 | 8.4 - 14.0 |
| $35,000–49,999 | 27.8 | 24.3 - 31.3 | 9.5 | 7.3 - 11.7 |
| $50,000–74,999 | 25.8 | 22.7 - 28.8 | 7.5 | 5.7 - 9.4 |
| $75,000+ | 19.6 | 17.5 - 21.6 | 5.3 | 4.2 - 6.5 |
| REGION | | | | |
| I–WESTERN | 28.3 | 25.0 - 31.6 | 11.2 | 9.0 - 13.3 |
| II–CENTRAL | 28.9 | 25.5 - 32.4 | 11.7 | 9.0 - 14.4 |
| III–NORTH EAST | 26.2 | 23.4 - 28.9 | 7.8 | 6.3 - 9.3 |
| IV–METRO WEST | 23.2 | 20.7 - 25.8 | 7.4 | 5.8 - 8.9 |
| V–SOUTH EAST | 29.1 | 26.3 - 31.8 | 10.7 | 9.0 - 12.5 |
| VI–BOSTON | 17.1 | 14.3 - 19.9 | 7.4 | 5.7 - 9.1 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient Data

## Section 4.4: Heart Disease and Stroke

Heart disease is the leading cause of death in the United States, while stroke is the third leading cause of death and disability in the United States. Heart disease includes a number of different heart conditions, the most common of which is coronary heart disease, a condition which can lead to a heart attack. A stroke occurs when blood to the brain is blocked or a blood vessel in the brain bursts, causing damage to the individual's brain.[24]

All respondents ages 35 and older were asked about heart disease and stroke. If they had been told by a doctor or nurse, or other health professional that they had had a heart attack or myocardial infarction, or if they had been told they had angina or coronary heart disease, respondents were classified as having heart disease. Respondents were also asked if they had been told by a doctor, nurse, or other health professional that they had a stroke. Presented here is the percentage of adults with heart disease and the percentage of adults who report having had a stroke.

HEART DISEASE, AGES 35 AND OLDER (Table 4.4)

- 9% of Massachusetts adults ages 35 and older reported that they had ever been told by a doctor, nurse, or other health professional that they had heart disease.
- Men (11%) were more likely than women (7%) to report having been told by a doctor, nurse, or other health professional that they had heart disease.
- Adults with less than a high school education (17%) were more likely to report heart disease than those with higher levels of education.
- Adults with annual household income of less than $25,000 (17%) were more likely to report having heart disease than those with higher annual household incomes.

STROKE, AGES 35 AND OLDER (Table 4.4)

- 3% of Massachusetts adults ages 35 and older reported that they had ever been told by a doctor, nurse, or other health professional that they had had a stroke.
- Similar percentages of men (3%) and women (3%) reported that they had had a stroke.
- The percentage of adults ages 35 and older reporting that they had ever had a stroke increased with increasing age, with adults ages 75 and older (10%) being ten times as likely to have had a stroke as adults ages 35-44 years (1%).
- The percentage of adults ages 35 and older reporting that they had ever had a stroke was highest among those with the lowest level of education.
- The percentage of adults ages 35 and older reporting that they had ever had a stroke was highest among those with the lowest annual household income (8%).

[24] Department of Health and Human Services, Centers for Disease Control and Prevention, Division for Heart Disease and Stroke, available at: http://www.cdc.gov/dhdsp Accessed July 17, 2006.

## TABLE 4.4 – HEART DISEASE AND STROKE AMONG MASSACHUSETTS ADULTS, AGES 35 YEARS AND OLDER, 2005

| | HEART DISEASE | | STROKE | |
|---|---|---|---|---|
| | % | 95% CI | % | 95% CI |
| OVERALL | 8.5 | 7.7 - 9.3 | 3.0 | 2.5 - 3.5 |
| GENDER | | | | |
| MALE | 10.9 | 9.5 - 12.3 | 3.3 | 2.5 - 4.2 |
| FEMALE | 6.5 | 5.5 - 7.4 | 2.6 | 2.0 - 3.2 |
| AGE GROUP | | | | |
| 35–44 | 1.9 | 1.1 - 2.8 | 0.9 | 0.3 - 1.6 |
| 45–54 | 3.8 | 2.6 - 5.0 | 1.2 | 0.5 - 1.9 |
| 55–64 | 9.0 | 7.2 - 10.9 | 2.3 | 1.4 - 3.1 |
| 65–74 | 15.5 | 12.5 - 18.4 | 4.8 | 3.2 - 6.4 |
| 75 AND OLDER | 25.6 | 21.9 - 29.2 | 10.4 | 7.8 - 12.9 |
| RACE-ETHNICITY* | | | | |
| WHITE | 8.5 | 7.6 - 9.4 | 2.8 | 2.3 - 3.3 |
| BLACK | 8.4 | 3.8 - 12.9 | 2.5 | 0.4 - 4.6 |
| HISPANIC | 6.2 | 3.5 - 8.9 | 3.7 | 1.5 - 5.9 |
| ASIAN | † | - | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 16.9 | 13.2 - 20.7 | 7.2 | 4.5 - 9.9 |
| HIGH SCHOOL | 10.8 | 9.0 - 12.6 | 3.9 | 2.8 - 5.1 |
| COLLEGE 1–3 YRS | 7.0 | 5.3 - 8.6 | 2.6 | 1.6 - 3.6 |
| COLLEGE 4+ YRS | 6.7 | 5.5 - 7.8 | 1.9 | 1.3 - 2.6 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 16.6 | 14.2 - 19.0 | 7.5 | 5.8 - 9.2 |
| $25,000–34,999 | 11.0 | 7.7 - 14.2 | 3.6 | 1.6 - 5.5 |
| $35,000–49,999 | 7.5 | 5.0 - 10.0 | 2.8 | 1.3 - 4.4 |
| $50,000–74,999 | 6.4 | 4.4 - 8.4 | 1.0 | 0.2 - 1.9 |
| $75,000+ | 4.1 | 3.0 - 5.2 | 1.0 | 0.4 - 1.6 |
| REGION | | | | |
| I–WESTERN | 9.3 | 7.1 - 11.5 | 2.8 | 1.7 - 4.0 |
| II–CENTRAL | 8.2 | 6.0 - 10.4 | 2.6 | 1.5 - 3.7 |
| III–NORTH EAST | 8.4 | 6.4 - 10.3 | 3.6 | 2.3 - 4.9 |
| IV–METRO WEST | 6.9 | 5.2 - 8.6 | 2.4 | 1.4 - 3.4 |
| V–SOUTH EAST | 10.5 | 8.5 - 12.4 | 3.5 | 2.3 - 4.7 |
| VI–BOSTON | 7.7 | 5.3 - 10.1 | 2.5 | 0.8 - 4.2 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient data

## Section 4.5: Disability

Nearly 50 million Americans have some type of disability, including long-term physical disabilities, such as those associated with spinal cord injury, cerebral palsy, sensory disabilities such as hearing loss and visual impairment, and other cognitive disabilities. Individuals with disabilities may face limited access to the range of activities, programs, and services that promote healthy living and this lack of access may keep these individuals from living full, healthy, and productive lives.[25]

All respondents were asked about disabilities and activity limitations. Respondents were classified as having a disability or limitation if, for at least one year, (1) they had an impairment that limited activities or caused cognitive difficulties, (2) they used special equipment or required help from others to get around, or (3) reported a disability of any kind. Those who answered yes to one or more of the conditions above but had been limited by their disability for less than one year, were excluded from the analysis. Presented here is the percentage of respondents who fit the above definition of having a disability. Respondents who reported having a disability were also asked if their disability or limitation required them to need help with routine needs or personal care.

HAVE DISABILITY (Table 4.5)

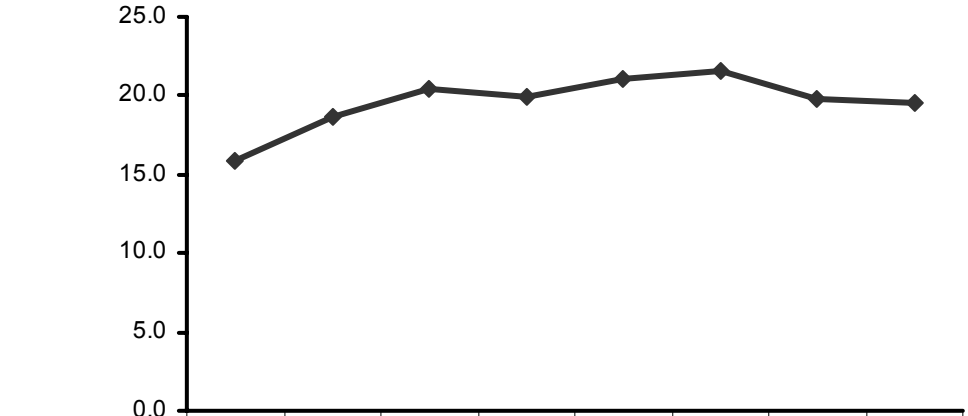
- 20% of Massachusetts adults reported having a disability or limitation for at least one year.
- 18% of men and 21% of women reported having a disability or limitation for at least one year.
- Adults with 4 or more years of college education (15%) were less likely to report that they had a disability for at least one year than adults with less than high school level of education (30%).
- Adults with annual household incomes of less than $25,000 (34%) were more likely to report having a disability for at least one year than adults with an annual household income of $35,000 or more.
- From 1998 to 2005, the percentage of adults who report that they have had a disability for at least one year has been in the range of 16% to 22% (Figure 4.5.1).

DISABILITY/NEED HELP WITH ACTIVITIES (Table 4.5)

- 7% of Massachusetts adults had a disability or limitation that caused them to require help with daily activities.
- Women (9%) were more likely than men (4%) to report that they had a disability that caused them to require help with daily activities.
- The percentage of adults who reported that they had a disability that caused them to require help with daily activities decreased with increasing education and household annual income.
- From 1999 to 2005, the percentage of adults reporting that they have a disability and need help with activities has been in the range of 5% to 7% (Figure 4.5.2).

[25] National Center on Birth Defects and Developmental Disabilities. Developmental Disabilities Health Topics. Available at: http://www.cdc.gov/nchs/fastats/disable.htm Accessed July 24, 2006.

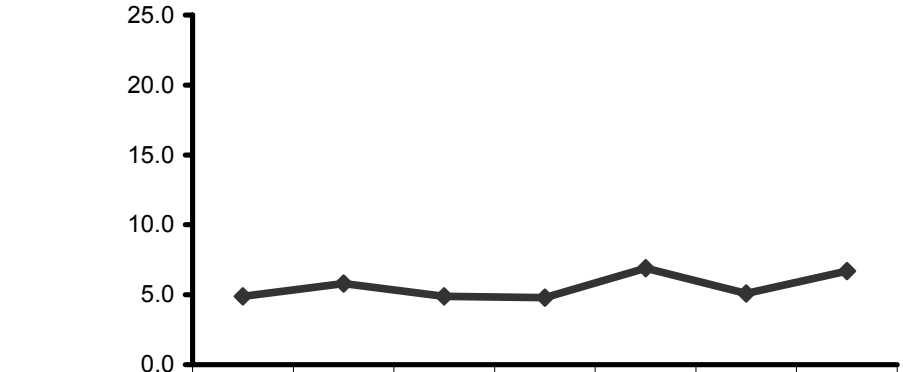
**Figure 4.5.1: Percentage of adults with a disability, MA, 1998-2005**




| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|
| MA Overall | 15.8 | 18.6 | 20.4 | 19.9 | 21.1 | 21.6 | 19.8 | 19.5 |

Source: Massachusetts BRFSS 1998-2005
Note: No comparable U.S. medians are available for this topic.

**Figure 4.5.2: Percentage of adults with a disability and need help with activity, MA, 1999-2005**




| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|
| MA Overall | 4.9 | 5.8 | 4.9 | 4.8 | 6.9 | 5.1 | 6.7 |

Source: Massachusetts BRFSS 1998-2005
Note: No comparable U.S. medians are available for this topic.

| TABLE 4.5 – DISABILITY AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | HAVE DISABILITY | | DISABILITY / NEED HELP WITH ACTIVITY | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 19.5 | 17.6 - 21.3 | 6.7 | 5.5 - 7.9 |
| GENDER | | | | |
| MALE | 18.1 | 15.4 - 20.8 | 3.8 | 2.6 - 5.0 |
| FEMALE | 20.7 | 18.2 - 23.2 | 9.3 | 7.3 - 11.3 |
| AGE GROUP | | | | |
| 18–24 | 19.1 | 10.3 - 27.9 | 5.8 | 0.0 - 11.8 |
| 25–34 | 9.8 | 6.3 - 13.4 | 2.7 | 0.7 - 4.6 |
| 35–44 | 13.5 | 10.2 - 16.8 | 5.5 | 3.1 - 7.9 |
| 45–54 | 21.5 | 17.7 - 25.4 | 8.4 | 5.6 - 11.2 |
| 55–64 | 24.3 | 20.2 - 28.3 | 6.9 | 4.6 - 9.2 |
| 65–74 | 25.7 | 20.2 - 31.2 | 8.6 | 5.7 - 11.5 |
| 75 AND OLDER | 33.1 | 27.2 - 39.0 | 12.5 | 8.6 - 16.5 |
| RACE-ETHNICITY* | | | | |
| WHITE | 19.9 | 17.8 - 21.9 | 6.6 | 5.3 - 8.0 |
| BLACK | 17.4 | 5.4 - 29.3 | 2.2 | 0.3 - 4.0 |
| HISPANIC | 19.0 | 12.7 - 25.2 | 10.5 | 5.4 - 15.7 |
| ASIAN | † | - | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 30.3 | 21.2 - 39.4 | 17.2 | 8.7 - 25.8 |
| HIGH SCHOOL | 20.4 | 16.8 - 24.0 | 7.7 | 5.1 - 10.3 |
| COLLEGE 1–3 YRS | 22.4 | 18.4 - 26.5 | 7.9 | 5.8 - 10.0 |
| COLLEGE 4+ YRS | 15.4 | 13.0 - 17.9 | 3.6 | 2.5 - 4.7 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 34.4 | 29.5 - 39.3 | 15.4 | 11.6 - 19.2 |
| $25,000–34,999 | 25.6 | 18.9 - 32.4 | 8.7 | 4.3 - 13.2 |
| $35,000–49,999 | 18.9 | 13.8 - 24.0 | 5.3 | 2.4 - 8.3 |
| $50,000–74,999 | 15.2 | 10.7 - 19.7 | 3.7 | 1.7 - 5.6 |
| $75,000+ | 12.2 | 9.3 - 15.1 | 2.3 | 1.2 - 3.4 |
| REGION | | | | |
| I–WESTERN | 21.5 | 16.3 - 26.7 | 7.3 | 4.6 - 10.0 |
| II–CENTRAL | 20.6 | 16.0 - 25.3 | 8.5 | 5.1 - 11.9 |
| III–NORTH EAST | 18.1 | 14.1 - 22.0 | 5.5 | 3.2 - 7.7 |
| IV–METRO WEST | 15.3 | 12.0 - 18.5 | 4.7 | 2.8 - 6.7 |
| V–SOUTH EAST | 24.2 | 19.2 - 29.2 | 9.0 | 5.2 - 12.8 |
| VI–BOSTON | 17.1 | 12.5 - 21.6 | 5.1 | 2.8 - 7.4 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient Data

# SECTION 5: CANCER SCREENING

## Section 5.1: Colorectal Cancer Screening

In 2004, colorectal cancer (cancer of the colon or rectum) was the second leading cause of cancer-related deaths in Massachusetts. Colorectal cancer is also one of the more commonly diagnosed cancers in the United States. The risk of developing colorectal cancer increases with advancing age and 90% of cases occur in persons ages 50 years and older. Other risk factors include a family history of colorectal cancer, poor diet, physical inactivity, obesity, alcohol and tobacco use. Colorectal cancer can be prevented with early detection using tests such as fecal occult blood tests (blood stool test), sigmoidoscopy, and colonoscopy.[26]

Respondents ages 50 and older were asked if they had ever had a blood stool test using a home test kit to determine if their stool contained blood and were also asked if they had ever had a sigmoidoscopy or colonoscopy, tests that examine the bowel for signs of cancer or other health problems. Presented here are the percentage of those respondents who reported that they had a blood stool test using a home test kit in the past 2 years and the percentage of respondents who reported that they had a sigmoidoscopy or colonoscopy.

BLOOD STOOL TEST IN THE PAST 2 YEARS, AGES 50 YEARS AND OLDER (Table 5.1)

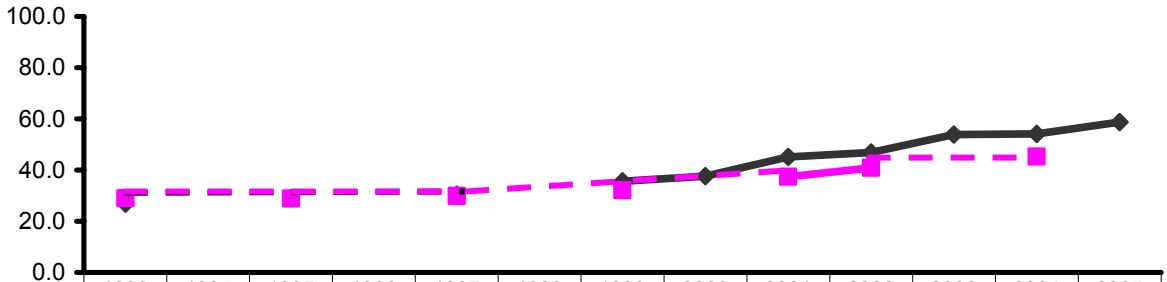
- 30% of Massachusetts adults ages 50 years and older reported that they had had a blood stool test in the past 2 years.
- Reports of a blood stool test in the past 2 years were highest among White adults (31%) and lowest among Hispanic adults (11%).
- The Boston region (21%) had the lowest reporting of having a blood stool test in the past 2 years.
- From 2001 to 2005, the percentage of adults ages 50 and older who had had a blood stool test in the past 2 years has decreased from 39% to 30% (Data not shown).

SIGMOIDOSCOPY OR COLONOSCOPY IN THE PAST 5 YEARS, AGES 50 YEARS AND OLDER (Table 5.1)

- 59% of Massachusetts adults ages 50 years and older reported that they had had a sigmoidoscopy or colonoscopy in the past 5 years.
- Adults ages 50-59 (53%) were less likely than adults ages 60-69 (67%) and adults ages 70-79 (63%) to report that they had had a sigmoidoscopy or colonoscopy in the past five years.
- Hispanic adults (39%) were less likely than White adults (60%) to report that they had had a sigmoidoscopy or colonoscopy in the past 5 years.
- Adults with four or more years of college (64%) had the highest reporting of having had a sigmoidoscopy or colonoscopy in the past 5 years.
- The Metro West region (69%) had the highest reporting of having had a sigmoidoscopy or colonoscopy in the past 5 years.
- From 1993 to 2005, the percentage of adults ages 50 and over who had a sigmoidoscopy or colonoscopy in the past 5 years has increased more than twice from 27% to 59% (Figure 5.1).

[26] Massachusetts Department of Public Health (DPH). Center for Health Information, Statistics, Research, and Evaluation. Massachusetts Death 2004.

**Figure 5.1: Percentage of adults age 50 years and older who have had a sigmoidoscopy or colonoscopy in the past 5 years, MA and US, 1993-2005**




| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 26.9 | | 29.0 | | 30.4 | | 35.6 | 37.6 | 45.1 | 46.9 | 53.9 | 54.1 | 58.8 |
| US median | 29.0 | | 28.9 | | 29.9 | | 32.1 | | 37.4 | 40.9 | | 45.2 | |

Source: Massachusetts BRFSS 1993-2005
Note: Dotted line signifies years in which questions were not asked.

## TABLE 5.1 – COLORECTAL CANCER SCREENING AMONG MASSACHUSETTS ADULTS, AGES 50 YEARS AND OLDER, 2005

| | Blood Stool Test in the Past 2 Years | | Sigmoidoscopy or Colonoscopy in Past 5 Years | |
|---|---|---|---|---|
| | % | 95% CI | % | 95% CI |
| Overall | 30.0 | 27.5 - 32.6 | 58.8 | 56.1 - 61.6 |
| Gender | | | | |
| male | 31.0 | 26.9 - 35.0 | 61.2 | 56.8 - 65.5 |
| female | 29.3 | 26.1 - 32.5 | 57.0 | 53.5 - 60.5 |
| Age Group | | | | |
| 50–59 | 26.1 | 22.2 - 29.9 | 52.8 | 48.5 - 57.2 |
| 60–69 | 34.3 | 29.4 - 39.2 | 66.5 | 61.6 - 71.5 |
| 70–79 | 34.9 | 29.3 - 40.6 | 62.9 | 57.0 - 68.7 |
| 80 and older | 25.1 | 17.5 - 32.8 | 55.0 | 46.6 - 63.5 |
| Race-ethnicity* | | | | |
| white | 31.1 | 28.4 - 33.8 | 59.8 | 56.9 - 62.6 |
| black | 12.7 | 5.2 - 20.2 | 60.5 | 44.1 - 77.0 |
| hispanic | 11.2 | 5.4 - 17.1 | 39.4 | 26.9 - 51.9 |
| asian | † | - | † | - |
| Education | | | | |
| < high school | 20.8 | 13.8 - 27.7 | 53.2 | 44.0 - 62.4 |
| high school | 28.4 | 24.0 - 32.9 | 57.9 | 52.9 - 62.9 |
| college 1–3 yrs | 33.3 | 27.5 - 39.0 | 52.5 | 46.3 - 58.6 |
| college 4+ yrs | 31.2 | 27.2 - 35.2 | 63.6 | 59.4 - 67.9 |
| Household Income | | | | |
| <$25,000 | 32.6 | 27.5 - 37.7 | 54.9 | 49.5 - 60.2 |
| $25,000–34,999 | 33.0 | 25.0 - 41.0 | 51.9 | 43.0 - 60.7 |
| $35,000–49,999 | 28.1 | 21.6 - 34.6 | 62.4 | 54.9 - 69.9 |
| $50,000–74,999 | 30.6 | 23.8 - 37.4 | 57.8 | 50.4 - 65.1 |
| $75,000+ | 28.1 | 22.9 - 33.4 | 63.3 | 57.5 - 69.0 |
| Region | | | | |
| I–Western | 34.2 | 27.8 - 40.6 | 53.9 | 47.0 - 60.7 |
| II–Central | 29.9 | 23.3 - 36.5 | 60.2 | 52.8 - 67.7 |
| III–North East | 33.5 | 27.2 - 39.8 | 53.2 | 46.6 - 59.8 |
| IV–Metro West | 30.9 | 25.4 - 36.5 | 68.5 | 62.9 - 74.1 |
| V–South East | 26.4 | 21.5 - 31.3 | 55.0 | 49.2 - 60.8 |
| VI–Boston | 20.7 | 14.1 - 27.3 | 58.9 | 50.0 - 67.8 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient Data

## Section 5.2: Breast Cancer Screening

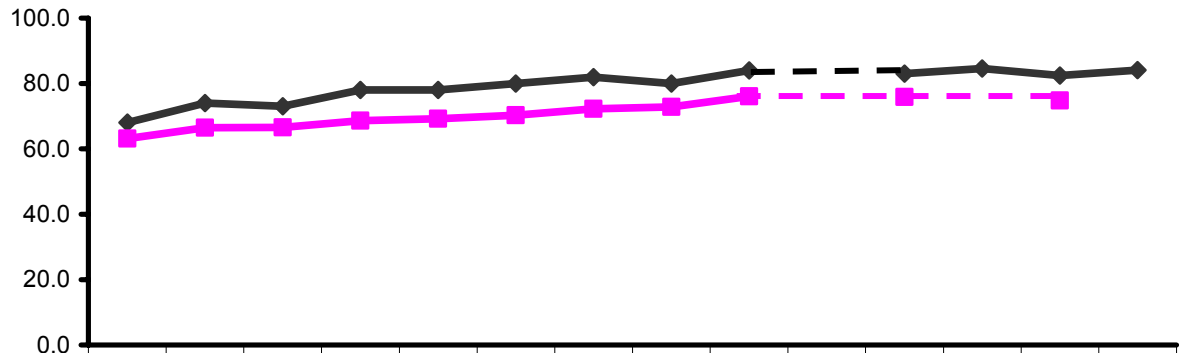
Except for skin cancer, breast cancer is the most commonly diagnosed cancer among American women. Mammography and clinical breast exams are ways to detect breast cancer at an early stage. Timely mammograms among women could reduce breast cancer mortality. [27]

All female respondents age 40 and older were asked about breast cancer screening. Women who reported that they had ever had a mammogram (an x-ray of each breast to look for cancer) were asked how long it had been since their last mammogram. The percentage of women, age 40 and older who had a mammogram in the past 2 years is presented.

MAMMOGRAM IN THE PAST 2 YEARS, WOMEN AGES 40 AND OLDER (Table 5.2)

- 84% of women ages 40 or older reported having had a mammogram in the past two years.
- The percentage of women reporting a mammogram in the past 2 years was lowest among women age 80 and older (69%).
- Women who had less than a high school education (75%) had the lowest reporting of having had a mammogram in the past 2 years.
- White (84%), Black (87%), and Hispanic (83%) women had similar percentages of reporting that they had a mammogram in the past 2 years.
- From 1992 to 1997, the percentage of women who had a mammogram in the past 2 years increased by an average annual percentage of 3%. Since 1997 the proportion remained in the range 80-85%. The percentage of Massachusetts women receiving a mammogram in the past 2 years was slightly higher than the national percentage of women receiving mammograms over the years (Figure 5.2).

**Figure 5.2: Percentage of women age 40 years and older who have had a mammography in the past 2 years, MA and US, 1992-2005**




| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 68.0 | 74.0 | 73.0 | 78.0 | 78.0 | 80.0 | 82.0 | 80.0 | 84.0 | | 83.0 | 84.6 | 82.5 | 84.1 |
| US median | 63.1 | 66.5 | 66.6 | 68.6 | 69.2 | 70.3 | 72.3 | 72.8 | 76.1 | | 75.9 | | 74.8 | |

Source: Massachusetts BRFSS 1992-2005
Note: Dotted line signifies years in which questions were not asked.

[27] National Center for Chronic Disease Prevention and Health Promotion, Cancer Prevention and Control. Breast Cancer and Mammography Information, Available at: http://www.cdc.gov/cancer/nbccedp/info-bc.htm Accessed July 24, 2006.

## TABLE 5.2 – MAMMOGRAPHY AMONG MASSACHUSETTS WOMEN, AGES 40 AND OLDER, 2005

| | MAMMOGRAM IN PAST 2 YEARS | |
|---|---|---|
| | % | 95% CI |
| OVERALL | 84.1 | 81.7 - 86.5 |
| GENDER | | |
| FEMALE | 84.1 | 81.7 - 86.5 |
| AGE GROUP | | |
| 40–49 | 81.0 | 76.4 - 85.7 |
| 50–59 | 87.5 | 82.9 - 92.1 |
| 60–69 | 90.4 | 85.9 - 94.9 |
| 70–79 | 86.9 | 81.3 - 92.4 |
| 80 AND OLDER | 69.0 | 59.4 - 78.7 |
| RACE-ETHNICITY* | | |
| WHITE | 84.4 | 81.9 - 86.9 |
| BLACK | 86.6 | 72.5 - 100.0 |
| HISPANIC | 82.5 | 73.3 - 91.8 |
| ASIAN | † | - |
| EDUCATION | | |
| < HIGH SCHOOL | 75.4 | 66.2 - 84.6 |
| HIGH SCHOOL | 83.7 | 79.1 - 88.2 |
| COLLEGE 1–3 YRS | 82.4 | 77.1 - 87.7 |
| COLLEGE 4+ YRS | 87.8 | 84.3 - 91.3 |
| HOUSEHOLD INCOME | | |
| <$25,000 | 82.8 | 77.9 - 87.7 |
| $25,000–34,999 | 78.9 | 70.4 - 87.3 |
| $35,000–49,999 | 84.2 | 77.3 - 91.1 |
| $50,000–74,999 | 88.8 | 83.4 - 94.3 |
| $75,000+ | 86.5 | 81.6 - 91.4 |
| REGION | | |
| I–WESTERN | 86.9 | 81.4 - 92.4 |
| II–CENTRAL | 83.0 | 76.4 - 89.6 |
| III–NORTH EAST | 83.4 | 77.7 - 89.1 |
| IV–METRO WEST | 87.1 | 82.3 - 91.8 |
| V–SOUTH EAST | 82.0 | 76.3 - 87.6 |
| VI–BOSTON | 80.1 | 71.9 - 88.3 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient Data

# SECTION 6: OTHER TOPICS

## Section 6.1: HIV Testing

Each year there are more people living with HIV/AIDS in Massachusetts than in the previous year. The number of people living with HIV/AIDS has increased because the number of new HIV infection diagnoses has exceeded the number of deaths among people with HIV/AIDS in the past five years.[28] HIV testing provides the opportunity for people to know their HIV status and receive appropriate care, treatment, and support services (if they are positive) or risk reduction support (if they are negative).

All respondents ages 18-64 were asked if they had ever been tested for HIV. Respondents were told not to include times that HIV testing had been done as part of a blood donation. Respondents who reported that they had ever been tested for HIV were asked the date of their most recent HIV test. Presented here are the percentage of respondents who had ever been tested for HIV, and the percentage of those who had been tested in the past year.

EVER TESTED FOR HIV, AGES 18-64 YEARS (Table 6.1)

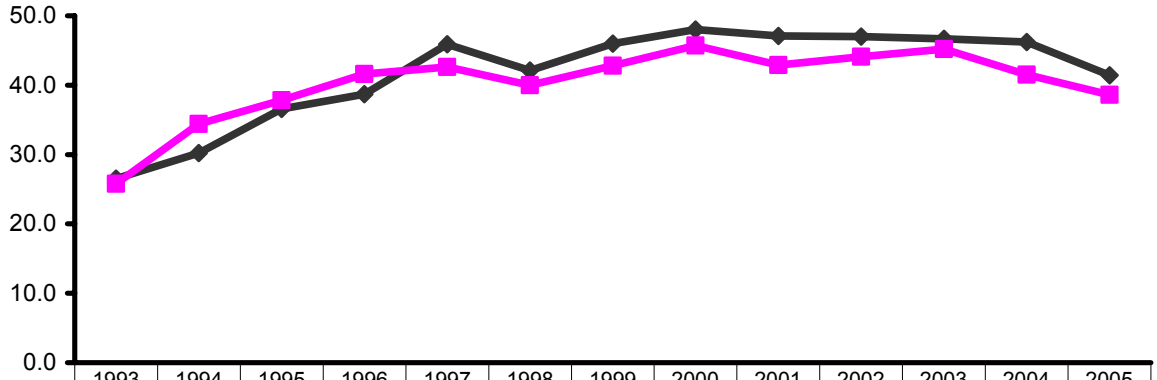
- 41% of adults ages 18-64 years reported ever having been tested for HIV.
- Adults ages 25-34 (60%) were more likely than adults in other age groups to report ever having been tested for HIV.
- Black adults (58%) and Hispanic adults (50%) were more likely than White adults (40%) to report ever having been tested for HIV.
- Adults with an annual household income of less than $25,000 (49%) were more likely than adults with an annual household income of $75,000 or more (40%) to have ever tested for HIV.
- The percentage of adults ages 18-64 who ever have been tested for HIV has increased from 27% in 1993 to 46% in 1997, fluctuating around 46% since that time. National data on HIV testing is available from 1995 and the Massachusetts trend is similar to the national trend for the available years (Figure 6.1).

TESTED FOR HIV IN PAST YEAR, AGES 18-64 YEARS (Table 6.1)

- 9% of Massachusetts adults ages 18-64 reported having been tested for HIV in the past year.
- Adults ages 18-34 were more likely to report having been tested in the past year than adults ages 35-64 years.
- Black (24%) and Hispanic (16%) adults were more likely than White adults (8%) to report having been tested for HIV in the past year.
- The percentage of adults ages 18-64 who had been tested for HIV in the past year increased from 11% to 15% from 1993 to 2000 and then declined, reaching 9% in 2005 (Data not shown).

[28] Massachusetts Department of Public Health. HIV/AIDS Bureau. Massachusetts HIV/AIDS Data Fact Sheet: The HIV/AIDS Epidemic in MA. October 2004.

**Figure 6.1: Percentage of adults who were ever tested for HIV, MA and US, 1993-2005**




| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MA Overall | 26.5 | 30.2 | 36.6 | 38.7 | 45.9 | 42.1 | 46.0 | 48.0 | 47.1 | 47.0 | 46.7 | 46.2 | 41.4 |
| US Median | 25.8 | 34.4 | 37.8 | 41.6 | 42.6 | 40.0 | 42.8 | 45.7 | 42.9 | 44.1 | 45.2 | 41.5 | 38.6 |

Source: Massachusetts BRFSS 1993-2005

| TABLE 6.1 – HIV TESTING AMONG MASSACHUSETTS ADULTS, AGES 18-64, 2005 | | | | |
|---|---|---|---|---|
| | EVER TESTED FOR HIV | | TESTED FOR HIV IN PAST YEAR | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 41.4 | 39.7 - 43.1 | 9.4 | 8.3 - 10.5 |
| GENDER | | | | |
| MALE | 40.6 | 38.0 - 43.3 | 10.2 | 8.4 - 12.0 |
| FEMALE | 42.1 | 39.9 - 44.4 | 8.6 | 7.2 - 10.0 |
| AGE GROUP | | | | |
| 18–24 | 35.9 | 29.6 - 42.1 | 15.9 | 11.2 - 20.5 |
| 25–34 | 60.3 | 56.4 - 64.3 | 16.3 | 13.2 - 19.4 |
| 35–44 | 50.5 | 47.4 - 53.6 | 7.6 | 5.9 - 9.2 |
| 45–54 | 32.3 | 29.4 - 35.1 | 5.3 | 4.0 - 6.6 |
| 55–64 | 20.1 | 17.3 - 22.8 | 2.5 | 1.6 - 3.5 |
| RACE-ETHNICITY* | | | | |
| WHITE | 39.5 | 37.7 - 41.4 | 7.8 | 6.7 - 9.0 |
| BLACK | 57.8 | 49.4 - 66.3 | 24.0 | 16.1 - 32.0 |
| HISPANIC | 50.2 | 43.7 - 56.6 | 15.7 | 10.9 - 20.4 |
| ASIAN | 36.0 | 25.2 - 46.7 | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 42.6 | 35.2 - 50.1 | 13.8 | 8.9 - 18.7 |
| HIGH SCHOOL | 39.2 | 35.4 - 42.9 | 8.7 | 6.4 - 11.1 |
| COLLEGE 1–3 YRS | 40.8 | 37.1 - 44.5 | 12.0 | 9.2 - 14.8 |
| COLLEGE 4+ YRS | 42.6 | 40.2 - 45.0 | 7.6 | 6.3 - 9.0 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 48.7 | 44.2 - 53.2 | 12.4 | 9.6 - 15.2 |
| $25,000–34,999 | 44.4 | 37.8 - 50.9 | 13.7 | 8.2 - 19.3 |
| $35,000–49,999 | 39.7 | 34.9 - 44.4 | 8.2 | 5.6 - 10.8 |
| $50,000–74,999 | 38.5 | 34.4 - 42.5 | 6.3 | 4.3 - 8.4 |
| $75,000+ | 40.3 | 37.4 - 43.1 | 8.5 | 6.8 - 10.3 |
| REGION | | | | |
| I–WESTERN | 44.6 | 39.9 - 49.2 | 9.6 | 6.6 - 12.6 |
| II–CENTRAL | 44.0 | 39.4 - 48.5 | 10.6 | 7.4 - 13.8 |
| III–NORTH EAST | 40.1 | 36.1 - 44.1 | 8.3 | 5.9 - 10.8 |
| IV–METRO WEST | 37.0 | 33.3 - 40.7 | 7.4 | 5.2 - 9.5 |
| V–SOUTH EAST | 38.9 | 34.8 - 42.9 | 8.1 | 5.8 - 10.5 |
| VI–BOSTON | 50.0 | 45.2 - 54.9 | 16.0 | 12.1 - 19.9 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient Data

## Section 6.2: Illicit Drug Use

In 2002, approximately 22 million Americans suffered from either alcohol or drug abuse or dependence on alcohol or drugs, with 3.3% of the population of the United States (age 12 and older) in need of treatment for a diagnosable drug problem.[29] Use of illicit drugs may have adverse physical consequences and also lead to impaired decision making about risk behaviors.[30]

All respondents were asked if they had ever, even if only once, used marijuana, powder cocaine, crack cocaine, hallucinogens, Oxycontin, or sedatives or tranquilizers that were not prescribed to them. Respondents ages 18-35 years were also asked if they had ever used MDMA/Ecstasy. Respondents were asked how long it had been since they had last used any of these drugs. Presented here are the percentage of adults who reported having ever used any of these illicit drugs and the percentage of adults who reported having used any of these illicit drugs within the past 30 days.

EVER USED ILLICIT DRUGS (Table 6.2)

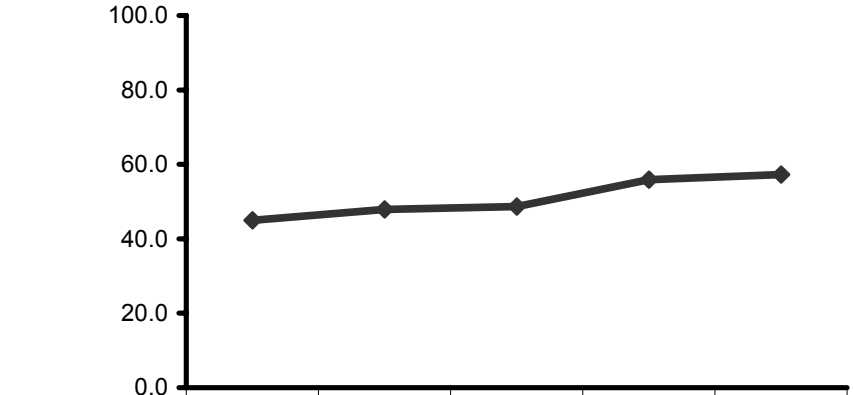
- 57% of Massachusetts adults reported having used an illicit drug at some time in their life.
- Men (63%) were more likely than women (52%) to report ever having used an illicit drug.
- Adults ages 65-74 (16%) were less likely to have ever used an illicit drug compared to other age groups.
- White adults (62%) were more likely than Black (44%) and Hispanic (33%) adults to have ever used an illicit drug.
- The percentage of adults who report that they ever used illicit drugs was 45% in 2001 and 57% in 2005 (Figure 6.2.1).

USED ILLICIT DRUGS IN THE PAST 30 DAYS (Table 6.2)

- 8% of Massachusetts adults reported having used an illicit drug in the past 30 days.
- Men (10%) were more likely than women (6%) to report having used an illicit drug in the past 30 days.
- Adults ages 18-24 (21%) were more likely to report having used an illicit drug in the past 30 days than adults age 35 and older.
- Reports of illicit drug use in the past 30 days decreased with increasing age.
- From 2001 to 2005, the percentage of adults who reported that they had used illicit drugs in the past 30 days has been in the range of 6% to 8% (Figure 6.2.2).

[29] United States Department of Health and Human Services, News Release: 22 Million In U.S. Suffer From Substance Dependence or Abuse.. Available at: http://www.dhhs.gov/news/press/2003pres/20030905.html. Accessed July 24, 2006.
[30] United States Department of Health and Human Services, January 2005 Fact Sheet.: Substance Abuse and HIV/AIDS. Available at: http://hab.hrsa.gov/history/fact2005/substance_abuse_and_hivaids.htm Accessed July 24, 2006

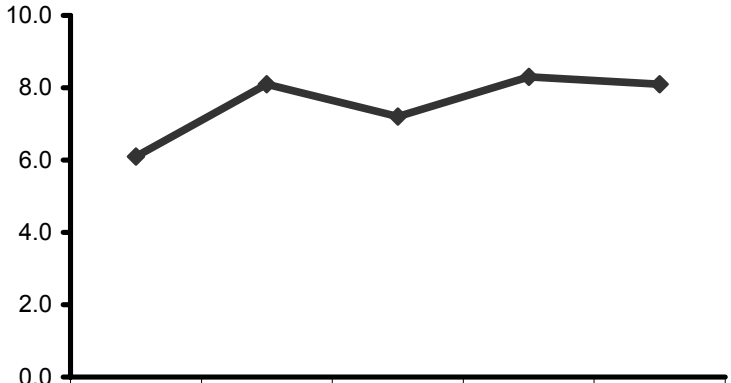
**Figure 6.2.1: Percentage of adults who have ever used illicit drugs, MA, 2001-2005**




| | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| MA Overall | 45.0 | 47.9 | 48.7 | 55.9 | 57.3 |

Source: Massachusetts BRFSS 2001-2005
Note: US medians are not available for this topic

**Figure 6.2.2: Percentage of adults who have used illicit drugs in the past 30 days, MA, 2001-2005**




| | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| MA Overall | 6.1 | 8.1 | 7.2 | 8.3 | 8.1 |

Source: Massachusetts BRFSS 2001-2005
Note: US medians are not available for this topic

| TABLE 6.2 – ILLICIT DRUG USE AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | EVER USED ILLICIT DRUGS | | USED ILLICIT DRUGS IN THE PAST 30 DAYS | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 57.3 | 54.6 - 60.1 | 8.1 | 6.2 - 10.0 |
| GENDER | | | | |
| MALE | 63.2 | 59.2 - 67.2 | 9.9 | 6.8 - 12.9 |
| FEMALE | 51.7 | 48.0 - 55.3 | 6.4 | 4.0 - 8.8 |
| AGE GROUP | | | | |
| 18–24 | 58.2 | 47.9 - 68.6 | 21.1 | 11.6 - 30.6 |
| 25–34 | 58.3 | 52.0 - 64.5 | 8.9 | 5.1 - 12.7 |
| 35–44 | 62.0 | 57.1 - 66.9 | 4.8 | 2.7 - 6.9 |
| 45–54 | 65.8 | 61.0 - 70.7 | 6.9 | 4.1 - 9.7 |
| 55–64 | 46.2 | 41.0 - 51.3 | 2.7 | 1.1 - 4.2 |
| 65–74 | 16.0 | 5.5 - 26.6 | † | - |
| RACE-ETHNICITY* | | | | |
| WHITE | 62.4 | 59.6 - 65.3 | 8.5 | 6.3 - 10.6 |
| BLACK | 44.1 | 29.6 - 58.6 | 11.4 | 0.0 - 24.3 |
| HISPANIC | 32.8 | 22.9 - 42.6 | 3.9 | 0.7 - 7.2 |
| ASIAN | † | - | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 45.3 | 32.8 - 57.8 | 16.1 | 4.6 - 27.6 |
| HIGH SCHOOL | 53.2 | 47.1 - 59.3 | 9.8 | 5.8 - 13.8 |
| COLLEGE 1–3 YRS | 61.8 | 56.5 - 67.1 | 8.3 | 4.6 - 12.1 |
| COLLEGE 4+ YRS | 59.2 | 55.5 - 63.0 | 5.6 | 3.4 - 7.8 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 52.1 | 44.9 - 59.3 | 9.8 | 5.9 - 13.7 |
| $25,000–34,999 | 63.0 | 53.7 - 72.4 | 9.8 | 2.4 - 17.2 |
| $35,000–49,999 | 53.7 | 45.7 - 61.8 | 11.0 | 5.6 - 16.4 |
| $50,000–74,999 | 63.2 | 57.1 - 69.3 | 8.8 | 3.7 - 13.8 |
| $75,000+ | 62.0 | 57.6 - 66.4 | 5.1 | 2.4 - 7.9 |
| REGION | | | | |
| I–WESTERN | 59.2 | 51.8 - 66.6 | 13.9 | 7.5 - 20.3 |
| II–CENTRAL | 57.8 | 50.7 - 65.0 | 7.2 | 2.3 - 12.0 |
| III–NORTH EAST | 56.4 | 50.1 - 62.7 | 7.2 | 3.9 - 10.5 |
| IV–METRO WEST | 56.8 | 50.9 - 62.7 | 7.0 | 3.9 - 10.0 |
| V–SOUTH EAST | 60.9 | 54.9 - 67.0 | 8.1 | 2.3 - 14.0 |
| VI–BOSTON | 49.8 | 42.0 - 57.6 | 5.3 | 2.4 - 8.3 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient data

## Section 6.3: Sexual Violence*

Sexual violence can have very harmful and lasting consequences for victims, families, and communities. In addition to the psychological consequences of rape, many victims may experience physiological problems such as chronic headaches, fatigue, sleep disturbances, recurrent nausea, decreased appetite, eating disorders, menstrual pain, sexual dysfunction, and suicidal behavior.[31]

All respondents were asked if they had experienced sexual violence at any time in their lifetimes. Sexual violence was defined as having sexual parts of the body touched without consent or attempted or completed sex without consent. Presented here are the percentages of men and women who had experienced sexual violence at some time in their lifetime.

SEXUAL VIOLENCE, EXPERIENCED BY WOMEN (Table 6.3)

- Among Massachusetts women, 17% reported having experienced sexual violence at some point in their lifetime*.
- Black women (31%) had the highest reporting of all race/ethnicity groups of ever having experienced lifetime sexual violence.

SEXUAL VIOLENCE, EXPERIENCED BY MEN (Table 6.3)

- Among Massachusetts men, 6% experienced sexual violence at some point in their lifetime*.
- Men ages 50-59 (11%), were more likely to report having experience lifetime sexual violence than men ages 35-44 (1%).

[31] Centers for Disease Control and Prevention, Sexual Violence Fact Sheet. Available at: http://www.cdc.gov/ncipc/factsheets/svfacts.htm Accessed on August 8, 2006.

* In 2005, sexual violence questions were changed. As such, rates are not comparable to years previous to 2005.

| TABLE 6.3 – SEXUAL VIOLENCE** AMONG MASSACHUSETTS ADULTS, 2005 | | | | |
|---|---|---|---|---|
| | SEXUAL VIOLENCE, WOMEN | | SEXUAL VIOLENCE, MEN | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 16.9 | 14.3 - 19.6 | 5.7 | 3.7 - 7.8 |
| AGE GROUP | | | | |
| 18–29 | 21.7 | 9.1 - 34.4 | † | - |
| 30–39 | 15.7 | 10.9 - 20.5 | † | - |
| 35–44 | 17.4 | 12.5 - 22.3 | 1 | 0.2 - 1.9 |
| 40–49 | 21.9 | 16.1 - 27.7 | 7.3 | 3.6 - 10.9 |
| 50–59 | 20.7 | 14.8 - 26.5 | 11.1 | 5.7 - 16.5 |
| 60-69 | 9.9 | 4.7 - 15.1 | 8.4 | 1.5 - 15.2 |
| 70+ | † | - | † | - |
| RACE-ETHNICITY* | | | | |
| WHITE | 16.0 | 13.2 - 18.8 | 6.1 | 3.7 - 8.5 |
| BLACK | 31.3 | 13.3 - 49.3 | † | - |
| HISPANIC | 11.9 | 4.7 - 19.0 | † | - |
| ASIAN | † | - | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | † | - | † | - |
| HIGH SCHOOL | 10.3 | 5.7 - 14.8 | 3 | 1.0 - 5.0 |
| COLLEGE 1–3 YRS | 20.1 | 14.5 - 25.7 | 4.8 | 1.2 - 8.4 |
| COLLEGE 4+ YRS | 19.4 | 16.0 - 22.8 | 6.9 | 3.3 - 10.5 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 17.8 | 12.5 - 23.2 | 5.8 | 2.0 - 9.6 |
| $25,000–34,999 | 11.9 | 4.8 - 19.0 | † | - |
| $35,000–49,999 | 18.3 | 11.6 - 25.0 | 3.3 | 0.3 - 6.4 |
| $50,000–74,999 | 18.2 | 12.7 - 23.7 | 4.7 | 0.3 - 9.0 |
| $75,000+ | 18.1 | 13.1 - 23.0 | † | - |
| REGION | | | | |
| I–WESTERN | 19.3 | 12.8 - 25.8 | 6.3 | 2.2 - 10.4 |
| II–CENTRAL | 11.4 | 6.5 - 16.4 | 4.6 | 1.2 - 8.0 |
| III–NORTH EAST | 16.0 | 9.7 - 22.4 | † | - |
| IV–METRO WEST | 16.6 | 11.3 - 21.9 | 3.9 | 1.5 - 6.3 |
| V–SOUTH EAST | † | - | † | - |
| VI–BOSTON | 17.1 | 11.0 - 23.2 | 6.7 | 2.5 - 10.8 |

* White, Black, and Asian race categories refer to non-Hispanic
† Insufficient data
** In 2005, sexual violence questions were changed. As such, rates are not comparable to years previous to 2005.

## Section 6.4: Intimate Partner Violence

Intimate partner violence is a significant cause of injury for women in the United States. Although women are more likely to experience intimate partner violence, men may also experience intimate partner violence. In a national survey, 25% of women reported experiencing intimate partner violence and 8% of men participating in the survey reported such experiences. Women also are more likely to be murdered by a current or former intimate partner. 32% of murders among women are perpretrated by a current or former intimate partner compared to 4% of murders among men.[32]

All respondents were asked if they had experienced violence from an intimate partner. An intimate partner was defined as any current or former spouse, boyfriend, or girlfriend, or someone that the respondent may have dated. Violence was defined as either physical violence, such as hitting or punching, threats of physical violence, or sexual assault. Presented here are the percentages of men and women, presented separately, who reported that they had ever experience violence by an intimate partner.

INTIMATE PARTNER VIOLENCE, EXPERIENCED BY WOMEN (Table 6.4)

- Among Massachusetts women, 22% reported that they experienced intimate partner violence.
- Women ages 70 and older (6%) were less likely than almost all other age groups to report having experienced intimate partner violence.
- Women with 1-3 years of college education (29%) had the highest percentage of respondents who reported experiencing intimate partner violence in their lifetimes.
- Women with a current annual household income of $25,000 to $34,999 (35%) had the highest reporting of lifetime experience of intimate partner violence.

INTIMATE PARTNER VIOLENCE, EXPERIENCED BY MEN (Table 6.4)

- Among Massachusetts men, 14% reported that they experienced intimate partner violence.
- Among men, lifetime experience of intimate partner violence did not vary significantly by annual household income or education.

[32] Centers for Disease Control and Prevention, Intimate Partner Violence Prevention Fact Sheet. Available at: http://www.cdc.gov/ncipc/fact_book/16_Intimate_Partner_Violence.htm Accessed on August 8, 2006.

| TABLE 6.4 – INTIMATE PARTNER VIOLENCE** AMONG MASSACHUSETTS ADULTS, | | | | | | |
|---|---|---|---|---|---|---|
| | INTIMATE PARTNER VIOLENCE, WOMEN | | | INTIMATE PARTNER VIOLENCE, MEN | | |
| | % | 95% CI | | % | 95% CI | |
| OVERALL | 22.4 | 19.6 | 25.3 | 13.8 | 11.1 | 16.6 |
| AGE GROUP | | | | | | |
| 18–29 | 28.4 | 15.4 | 41.5 | 13.1 | 3.7 | 22.5 |
| 30–39 | 20.4 | 14.4 | 26.4 | 16.4 | 7.3 | 25.5 |
| 35–44 | 25.9 | 20.1 | 31.8 | 14.5 | 9.3 | 19.8 |
| 40–49 | 26.3 | 20.0 | 32.6 | 16.0 | 10.5 | 21.5 |
| 50–59 | 28.0 | 21.5 | 34.5 | 13.0 | 7.3 | 18.7 |
| 60-69 | 12.3 | 6.7 | 17.8 | 10.2 | 3.9 | 16.6 |
| 70+ | 5.6 | 1.8 | 9.4 | † | | |
| RACE-ETHNICITY* | | | | | | |
| WHITE | 22.5 | 19.4 | 25.8 | 14.1 | 11.1 | 17.2 |
| BLACK | 18.3 | 7.5 | 29.1 | 21.2 | 5.6 | 36.7 |
| HISPANIC | 24.3 | 14.3 | 34.4 | 12.7 | 3.9 | 21.5 |
| ASIAN | † | | | † | | |
| EDUCATION | | | | | | |
| < HIGH SCHOOL | 23.2 | 5.1 | 41.4 | 17.4 | 5.4 | 29.4 |
| HIGH SCHOOL | 18.3 | 12.9 | 23.7 | 13.6 | 7.1 | 20.2 |
| COLLEGE 1–3 YRS | 29.4 | 23.2 | 35.5 | 17.2 | 10.8 | 23.5 |
| COLLEGE 4+ YRS | 20.7 | 17.1 | 24.3 | 11.9 | 8.5 | 15.3 |
| HOUSEHOLD INCOME | | | | | | |
| <$25,000 | 28.0 | 21.4 | 34.6 | 19.1 | 12.6 | 25.7 |
| $25,000–34,999 | 34.6 | 23.9 | 45.3 | 12.3 | 3.4 | 21.3 |
| $35,000–49,999 | 24.0 | 16.2 | 31.9 | 10.6 | 4.1 | 17.0 |
| $50,000–74,999 | 19.1 | 13.2 | 25.0 | 15.3 | 8.2 | 22.5 |
| $75,000+ | 17.0 | 12.6 | 21.5 | 12.9 | 8.2 | 17.6 |
| REGION | | | | | | |
| I–WESTERN | 25.9 | 18.4 | 33.5 | 17.4 | 9.6 | 25.1 |
| II–CENTRAL | 23.2 | 15.8 | 30.6 | 15.1 | 6.1 | 24.2 |
| III–NORTH EAST | 22.0 | 15.8 | 28.2 | 15.3 | 8.1 | 22.5 |
| IV–METRO WEST | 19.3 | 13.7 | 24.8 | 11.4 | 6.4 | 16.4 |
| V–SOUTH EAST | 25.7 | 17.9 | 33.4 | 13.1 | 8.3 | 18.0 |
| VI–BOSTON | 17.2 | 11.0 | 23.3 | 10.7 | 4.8 | 16.7 |

* White, Black, and Asian race categories refer to non-Hispanic
† insufficient data
** In 2005, intimate partner violence questions were changed. As such, rates are not comparable with years previous to 2005.

# APPENDIX

# AGE-ADJUSTED PERCENTAGES FOR SELECTED TOPICS

The age-adjusted percentages presented below were calculated only if the questions about the corresponding health topic were not restricted by the age of the respondents. Some of the survey questions like colorectal cancer screening, HIV testing and others were asked only if the respondents were in certain age groups (e.g. 50 and over, less than 65). We did not calculate age-adjusted percentages for the health topics based on the age-restricted questions. The age-adjusted percentages presented in this report were based on the following five age groups: 18-24, 25-34, 35-44, 45-64, 65-99. The projected 2000 US population was used as the standard population for age-adjustment.

Age-adjusted percentages are available for the following topics:

- Fair or poor health – Fair or poor health (section 1.1)
- Poor mental health – 15+ days poor mental health days in past month (section 1.2)
- Sad, blue or depressed – 15+ days sad, blue or depressed days in past month (section 1.2)
- Poor physical health – 15+ days poor physical health days in past month (section 1.2)
- Personal doctor – Have a personal health care provider (section 2.2)
- No doctor due to cost – Could not see doctor due to cost (section 2.2)
- Current smoker – A current smoker either some days or everyday (section 3.1)
- Heavy smoker – A current smoker who smokes 21 or more cigarettes per day (section 3.1)
- Quit attempt – A current smoker who attempted to quit at least once in the past year (section 3.2)
- Planning to quit – A current smoker who planned to quit within the next 30 days (section 3.2)
- No smoking in house – Live in a household where smoking is not allowed (section 3.3)
- Environmental smoke – Any exposure to environmental tobacco smoke (section 3.3)
- Binge drinking – 5 or more drinks on any one occasion in the past month (section 3.4)
- Heavy drinking – 60+ drinks for men or 30+ drinks for women in the past month (section 3.4)
- Overweight – BMI greater or equal to 25.0 (section 3.5)
- Obesity – BMI greater or equal to 30.0 (section 3.5)
- Any exercise – Any leisure time physical activity (section 3.6)
- Regular activity – Regular physical activity in the past month (section 3.6)
- Fruits and vegetables – 5 or more servings of fruit and vegetable per day (section 3.7)
- Cholesterol checked – Cholesterol checked in past 5 years (section 3.8)
- High cholesterol – Have high cholesterol (section 3.8)
- High blood pressure – Have high blood pressure (section 3.9)
- Medicine for high BP – Take medicine for high blood pressure (section 3.9)
- Diabetes – Have diabetes (section 4.1)
- Current asthma – Currently have asthma (section 4.2)
- Ever had asthma – Ever had asthma (section 4.2)
- Arthritis – Have arthritis (section 4.3)
- Arthritis Limitations – Have limitations due to arthritis (section 4.3)
- Disability – Have a disability (section 4.5)
- Disabled and need help – Have a disability and need help with activities (section 4.5)
- Ever used illicit drugs – Ever used illicit drugs (section 6.2)
- Drugs past 30 days – Used illicit drugs in the past 30 days (section 6.2)

# AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS

| MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2005 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FAIR OR POOR HEALTH | | POOR MENTAL HEALTH | | SAD, BLUE, OR DEPRESSED | | POOR PHYSICAL HEALTH | | PERSONAL DOCTOR | |
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| OVERALL | 13.0 | 12.1 - 14.0 | 8.9 | 8.0 - 9.8 | 7.7 | 6.3 - 9.0 | 9.1 | 8.3 - 10.0 | 86.8 | 85.7 - 87.9 |
| GENDER | | | | | | | | | | |
| MALE | 12.2 | 10.8 - 13.7 | 7.1 | 5.9 - 8.4 | 7.5 | 5.6 - 9.5 | 8.1 | 6.8 - 9.3 | 83.7 | 81.9 - 85.5 |
| FEMALE | 13.8 | 12.5 - 15.1 | 10.6 | 9.3 - 11.9 | 7.8 | 6.0 - 9.7 | 10.1 | 8.9 - 11.3 | 89.9 | 88.7 - 91.2 |
| RACE-ETHNICITY* | | | | | | | | | | |
| WHITE | 11.7 | 10.6 - 12.8 | 8.7 | 7.6 - 9.7 | 7.0 | 5.5 - 8.5 | 8.6 | 7.6 - 9.5 | 89.6 | 88.5 - 90.7 |
| BLACK | 17.1 | 12.2 - 22.0 | 9.0 | 5.1 - 13.0 | 15.0 | 6.8 - 23.3 | 14.1 | 8.5 - 19.8 | 84.8 | 79.8 - 89.8 |
| HISPANIC | 31.9 | 27.2 - 36.5 | 11.1 | 8.3 - 13.9 | 13.0 | 7.9 - 18.1 | 14.9 | 11.2 - 18.6 | 67.6 | 62.7 - 72.4 |
| ASIAN | † | - | † | - | † | - | † | - | 85.5 | 80.4 - 90.6 |
| EDUCATION | | | | | | | | | | |
| < HIGH SCHOOL | 33.5 | 28.9 - 38.1 | 16.3 | 12.5 - 20.2 | 16.4 | 10.2 - 22.7 | 15.2 | 11.4 - 18.9 | 71.6 | 67.0 - 76.2 |
| HIGH SCHOOL | 16.0 | 14.0 - 18.0 | 9.8 | 7.9 - 11.7 | 9.4 | 6.4 - 12.4 | 11.3 | 9.5 - 13.1 | 84.7 | 82.3 - 87.0 |
| COLLEGE 1–3 YRS | 14.9 | 12.7 - 17.0 | 10.9 | 8.9 - 12.8 | 9.9 | 7.1 - 12.7 | 10.6 | 8.7 - 12.5 | 87.9 | 85.7 - 90.1 |
| COLLEGE 4+ YRS | 6.8 | 5.8 - 7.9 | 5.6 | 4.5 - 6.7 | 3.8 | 2.6 - 5.1 | 6.4 | 5.0 - 7.9 | 88.7 | 86.8 - 90.6 |
| HOUSEHOLD INCOME | | | | | | | | | | |
| <$25,000 | 27.3 | 24.4 - 30.2 | 17.1 | 14.5 - 19.6 | 17.8 | 13.4 - 22.1 | 18.1 | 15.6 - 20.7 | 76.5 | 73.4 - 79.5 |
| $25,000–34,999 | 19.7 | 15.6 - 23.8 | 11.8 | 8.5 - 15.0 | 6.6 | 2.9 - 10.2 | 11.2 | 8.1 - 14.3 | 78.7 | 74.4 - 83.0 |
| $35,000–49,999 | 11.4 | 9.0 - 13.8 | 6.5 | 4.5 - 8.4 | 5.0 | 2.5 - 7.5 | 9.1 | 6.6 - 11.7 | 85.6 | 82.3 - 89.0 |
| $50,000–74,999 | 8.0 | 5.7 - 10.2 | 7.5 | 4.7 - 10.4 | 8.1 | 2.3 - 13.8 | 6.3 | 3.7 - 8.9 | 91.3 | 88.7 - 93.9 |
| $75,000+ | 5.5 | 4.2 - 6.9 | 5.0 | 3.6 - 6.3 | 3.7 | 2.0 - 5.4 | 4.1 | 2.8 - 5.4 | 92.5 | 90.6 - 94.4 |
| REGION | | | | | | | | | | |
| I–WESTERN | 14.5 | 12.1 - 16.9 | 11.2 | 8.6 - 13.7 | 9.6 | 5.7 - 13.5 | 8.9 | 6.8 - 11.1 | 85.1 | 82.3 - 88.0 |
| II–CENTRAL | 15.4 | 12.7 - 18.1 | 10.5 | 8.0 - 13.1 | 7.3 | 4.2 - 10.5 | 11.6 | 9.1 - 14.1 | 90.1 | 87.8 - 92.5 |
| III–NORTH EAST | 12.9 | 11.0 - 14.8 | 8.0 | 6.2 - 9.8 | 6.9 | 4.6 - 9.1 | 8.1 | 6.6 - 9.7 | 85.4 | 82.8 - 88.1 |
| IV–METRO WEST | 8.9 | 6.7 - 11.2 | 5.6 | 3.7 - 7.5 | 7.8 | 4.5 - 11.0 | 7.6 | 5.6 - 9.5 | 89.5 | 87.0 - 92.0 |
| V–SOUTH EAST | 13.6 | 11.4 - 15.9 | 10.4 | 8.2 - 12.7 | 8.0 | 4.8 - 11.2 | 10.5 | 8.3 - 12.7 | 87.2 | 84.7 - 89.8 |
| VI–BOSTON | 16.1 | 13.3 - 18.9 | 9.1 | 6.9 - 11.3 | 4.8 | 2.3 - 7.2 | 8.6 | 6.5 - 10.7 | 79.8 | 76.3 - 83.2 |

## AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

**MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2005**

| | NO DOCTOR DUE TO COST | | CURRENT SMOKER | | HEAVY SMOKER | | QUIT ATTEMPT | | PLANNING TO QUIT | |
|---|---|---|---|---|---|---|---|---|---|---|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| OVERALL | 8.9 | 8.0 - 9.8 | 18.2 | 17.0 - 19.4 | 1.9 | 1.4 - 2.4 | 56.3 | 51.7 - 60.8 | 32.8 | 28.0 - 37.6 |
| GENDER | | | | | | | | | | |
| MALE | 7.6 | 6.4 - 8.8 | 18.0 | 16.1 - 19.8 | 2.3 | 1.5 - 3.1 | 55.7 | 47.8 - 63.5 | 34.9 | 26.6 - 43.3 |
| FEMALE | 10.2 | 8.9 - 11.6 | 18.4 | 16.8 - 19.9 | 1.5 | 0.9 - 2.1 | 57.4 | 52.1 - 62.6 | 31.6 | 25.8 - 37.3 |
| RACE-ETHNICITY* | | | | | | | | | | |
| WHITE | 7.6 | 6.6 - 8.6 | 19.0 | 17.6 - 20.5 | 2.1 | 1.5 - 2.7 | 56.2 | 51.3 - 61.1 | 31.6 | 26.4 - 36.8 |
| BLACK | 12.0 | 7.8 - 16.1 | 17.3 | 12.5 - 22.0 | 1.2 | 0.0 - 2.6 | 67.5 | 57.2 - 77.9 | 47.5 | 31.1 - 63.9 |
| HISPANIC | 17.3 | 13.4 - 21.3 | 16.5 | 12.7 - 20.3 | 1.5 | 0.0 - 3.3 | 59.3 | 43.8 - 74.8 | 50.5 | 34.3 - 66.7 |
| ASIAN | † | - | † | - | † | - | 30.0 | 26.7 - 33.4 | 28.0 | 17.8 - 38.1 |
| EDUCATION | | | | | | | | | | |
| < HIGH SCHOOL | 18.1 | 13.9 - 22.2 | 29.1 | 24.2 - 33.9 | 4.1 | 1.4 - 6.7 | 65.3 | 54.1 - 76.5 | 37.3 | 24.7 - 49.9 |
| HIGH SCHOOL | 11.5 | 9.5 - 13.5 | 29.1 | 26.3 - 31.9 | 4.9 | 3.0 - 6.7 | 53.2 | 46.1 - 60.3 | 28.7 | 21.5 - 35.8 |
| COLLEGE 1–3 YRS | 10.0 | 8.1 - 11.8 | 21.6 | 19.2 - 24.1 | 1.8 | 0.9 - 2.7 | 65.3 | 57.4 - 73.1 | 34.3 | 24.4 - 44.2 |
| COLLEGE 4+ YRS | 5.9 | 4.3 - 7.5 | 8.7 | 7.1 - 10.3 | NP | - - - | 49.3 | 41.0 - 57.7 | 34.8 | 21.9 - 47.7 |
| HOUSEHOLD INCOME | | | | | | | | | | |
| <$25,000 | 20.4 | 17.6 - 23.1 | 29.3 | 26.2 - 32.4 | 4.7 | 2.7 - 6.7 | 66.3 | 59.3 - 73.4 | 37.2 | 29.0 - 45.4 |
| $25,000–34,999 | 13.6 | 10.3 - 16.8 | 26.3 | 21.8 - 30.8 | 1.8 | 0.1 - 3.4 | 52.4 | 40.3 - 64.6 | 33.7 | 21.1 - 46.3 |
| $35,000–49,999 | 9.6 | 7.3 - 11.9 | 22.3 | 18.5 - 26.1 | 3.0 | 1.5 - 4.6 | 53.8 | 40.2 - 67.5 | 28.9 | 16.9 - 40.9 |
| $50,000–74,999 | 7.6 | 4.4 - 10.8 | 16.4 | 13.7 - 19.0 | 2.2 | 0.8 - 3.6 | 46.4 | 36.2 - 56.7 | 17.2 | 7.9 - 26.6 |
| $75,000+ | 3.0 | 1.8 - 4.2 | 10.0 | 8.0 - 12.0 | 0.3 | 0.1 - 0.5 | 48.8 | 37.8 - 59.8 | 22.9 | 14.9 - 30.9 |
| REGION | | | | | | | | | | |
| I–WESTERN | 10.4 | 8.1 - 12.7 | 19.1 | 15.9 - 22.3 | 2.3 | 0.7 - 3.9 | 47.2 | 35.1 - 59.3 | 19.5 | 10.2 - 28.8 |
| II–CENTRAL | 9.9 | 7.5 - 12.3 | 21.4 | 18.1 - 24.7 | 2.1 | 0.9 - 3.3 | 60.1 | 50.1 - 70.1 | 39.7 | 30.1 - 49.4 |
| III–NORTH EAST | 7.9 | 6.2 - 9.6 | 18.4 | 15.7 - 21.2 | 1.1 | 0.4 - 1.7 | 60.4 | 50.9 - 69.9 | 32.4 | 20.9 - 44.0 |
| IV–METRO WEST | 7.7 | 5.3 - 10.1 | 13.0 | 10.3 - 15.7 | 0.7 | 0.2 - 1.2 | 52.8 | 41.9 - 63.7 | 36.3 | 22.1 - 50.5 |
| V–SOUTH EAST | 9.8 | 7.5 - 12.0 | 21.6 | 18.6 - 24.5 | 3.6 | 1.9 - 5.2 | 58.0 | 47.0 - 69.0 | 29.4 | 20.0 - 38.8 |
| VI–BOSTON | 9.2 | 7.0 - 11.4 | 19.8 | 16.6 - 23.0 | 2.7 | 0.7 - 4.6 | 53.6 | 42.3 - 64.8 | 39.7 | 28.1 - 51.2 |

## AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

| MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2005 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NO SMOKING IN HOUSE | | ENVIRONMENTAL SMOKE | | BINGE DRINKING | | HEAVY DRINKING | | OVERWEIGHT | |
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| OVERALL | 78.3 | 76.6 - 80.0 | 45.2 | 43.1 - 47.2 | 16.1 | 14.9 - 17.3 | 6.4 | 5.6 - 7.2 | 55.9 | 54.3 - 57.4 |
| GENDER | | | | | | | | | | |
| MALE | 78.6 | 76.0 - 81.2 | 50.0 | 47.0 - 53.1 | 23.7 | 21.6 - 25.7 | 7.4 | 6.0 - 8.8 | 65.5 | 63.2 - 67.7 |
| FEMALE | 78.1 | 75.9 - 80.4 | 40.7 | 38.0 - 43.4 | 8.9 | 7.8 - 10.1 | 5.5 | 4.6 - 6.4 | 46.2 | 44.2 - 48.1 |
| RACE-ETHNICITY* | | | | | | | | | | |
| WHITE | 77.0 | 75.0 - 79.0 | 45.9 | 43.8 - 48.1 | 17.5 | 16.0 - 18.9 | 7.0 | 6.0 - 8.0 | 54.8 | 53.1 - 56.5 |
| BLACK | 71.9 | 63.9 - 80.0 | 56.9 | 47.6 - 66.3 | 14.7 | 9.6 - 19.8 | 6.0 | 1.9 - 10.0 | 67.8 | 61.1 - 74.5 |
| HISPANIC | 88.3 | 83.0 - 93.7 | 39.6 | 32.1 - 47.0 | 13.1 | 9.2 - 17.1 | 3.2 | 1.3 - 5.1 | 69.3 | 64.5 - 74.0 |
| ASIAN | 87.4 | 76.9 - 98.0 | 46.9 | 32.8 - 60.9 | 6.3 | 2.9 - 9.7 | † | - | 24.8 | 17.0 - 32.6 |
| EDUCATION | | | | | | | | | | |
| < HIGH SCHOOL | 69.6 | 62.8 - 76.3 | 55.4 | 47.8 - 62.9 | 17.0 | 12.4 - 21.5 | 5.3 | 2.7 - 7.8 | 68.9 | 64.1 - 73.8 |
| HIGH SCHOOL | 69.2 | 65.3 - 73.1 | 55.0 | 51.1 - 58.8 | 18.5 | 15.9 - 21.1 | 7.0 | 5.4 - 8.7 | 61.5 | 58.6 - 64.5 |
| COLLEGE 1–3 YRS | 73.7 | 69.9 - 77.5 | 48.6 | 44.7 - 52.5 | 16.1 | 13.7 - 18.4 | 7.6 | 5.9 - 9.3 | 57.5 | 54.3 - 60.6 |
| COLLEGE 4+ YRS | 85.6 | 83.2 - 88.0 | 37.4 | 33.8 - 40.9 | 15.6 | 13.5 - 17.8 | 6.0 | 4.4 - 7.6 | 50.7 | 48.1 - 53.4 |
| HOUSEHOLD INCOME | | | | | | | | | | |
| <$25,000 | 66.2 | 61.5 - 70.9 | 53.3 | 48.3 - 58.3 | 15.6 | 12.9 - 18.3 | 5.5 | 4.0 - 7.0 | 60.1 | 56.7 - 63.4 |
| $25,000–34,999 | 71.5 | 65.5 - 77.5 | 50.8 | 44.4 - 57.2 | 16.6 | 12.9 - 20.3 | 6.6 | 4.0 - 9.2 | 55.9 | 50.7 - 61.0 |
| $35,000–49,999 | 72.0 | 66.9 - 77.0 | 47.2 | 41.7 - 52.7 | 17.2 | 13.6 - 20.8 | 7.3 | 4.7 - 9.8 | 55.8 | 51.8 - 59.8 |
| $50,000–74,999 | 81.5 | 77.2 - 85.8 | 44.3 | 38.3 - 50.2 | 19.0 | 15.3 - 22.6 | 8.2 | 5.0 - 11.3 | 58.1 | 53.7 - 62.4 |
| $75,000+ | 85.5 | 82.2 - 88.7 | 42.2 | 38.4 - 46.0 | 17.6 | 15.1 - 20.1 | 7.5 | 5.7 - 9.4 | 55.6 | 52.5 - 58.8 |
| REGION | | | | | | | | | | |
| I–WESTERN | 77.3 | 72.8 - 81.8 | 48.7 | 43.3 - 54.0 | 16.6 | 13.4 - 19.8 | 7.1 | 4.8 - 9.4 | 61.0 | 57.1 - 64.9 |
| II–CENTRAL | 74.9 | 70.2 - 79.7 | 41.7 | 36.4 - 47.0 | 15.9 | 12.9 - 18.9 | 6.6 | 4.6 - 8.6 | 57.7 | 53.9 - 61.6 |
| III–NORTH EAST | 81.4 | 77.7 - 85.0 | 47.7 | 43.1 - 52.2 | 16.5 | 13.7 - 19.3 | 6.1 | 4.3 - 7.9 | 55.3 | 52.0 - 58.7 |
| IV–METRO WEST | 84.5 | 80.9 - 88.1 | 40.5 | 35.8 - 45.3 | 15.3 | 12.4 - 18.2 | 5.9 | 4.1 - 7.7 | 51.7 | 48.0 - 55.4 |
| V–SOUTH EAST | 73.8 | 69.7 - 77.9 | 48.0 | 43.7 - 52.2 | 16.2 | 13.4 - 19.0 | 6.3 | 4.4 - 8.2 | 57.5 | 54.0 - 60.9 |
| VI–BOSTON | 73.9 | 68.8 - 79.0 | 45.6 | 40.3 - 50.9 | 16.6 | 13.4 - 19.7 | 6.3 | 4.1 - 8.6 | 53.4 | 49.5 - 57.4 |

## AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

| MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2005 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OBESITY | | ANY EXERCISE | | REGULAR ACTIVITY | | FRUITS AND VEGETABLES | | CHOLESTEROL CHECKED | |
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| OVERALL | 20.7 | 19.5 - 22.0 | 78.2 | 76.9 - 79.5 | 52.7 | 51.1 - 54.3 | 28.4 | 27.1 - 29.8 | 78.2 | 76.9 - 79.5 |
| GENDER | | | | | | | | | | |
| MALE | 22.6 | 20.7 - 24.6 | 76.6 | 74.6 - 78.6 | 53.9 | 51.4 - 56.3 | 24.0 | 22.0 - 26.0 | 76.6 | 74.6 - 78.6 |
| FEMALE | 18.8 | 17.2 - 20.3 | 79.7 | 78.1 - 81.3 | 51.9 | 49.8 - 53.9 | 32.5 | 30.6 - 34.3 | 79.7 | 78.1 - 81.3 |
| RACE-ETHNICITY* | | | | | | | | | | |
| WHITE | 20.0 | 18.6 - 21.4 | 80.2 | 78.8 - 81.7 | 54.5 | 52.7 - 56.2 | 28.8 | 27.3 - 30.4 | 80.2 | 78.8 - 81.7 |
| BLACK | 33.9 | 26.5 - 41.3 | 75.5 | 70.0 - 80.9 | 39.0 | 31.8 - 46.1 | 25.8 | 20.0 - 31.6 | 75.5 | 70.0 - 80.9 |
| HISPANIC | 31.5 | 26.4 - 36.6 | 57.6 | 52.2 - 63.0 | 41.5 | 35.9 - 47.2 | 21.0 | 16.6 - 25.4 | 57.6 | 52.2 - 63.0 |
| ASIAN | † | - | 69.3 | 61.2 - 77.5 | 48.6 | 38.1 - 59.1 | 33.5 | 23.9 - 43.2 | 69.3 | 61.2 - 77.5 |
| EDUCATION | | | | | | | | | | |
| < HIGH SCHOOL | 31.3 | 26.3 - 36.2 | 59.7 | 54.4 - 64.9 | 37.9 | 32.2 - 43.5 | 17.4 | 13.3 - 21.4 | 59.7 | 54.4 - 64.9 |
| HIGH SCHOOL | 25.3 | 22.6 - 27.9 | 75.9 | 73.2 - 78.6 | 50.4 | 47.3 - 53.6 | 22.8 | 20.2 - 25.5 | 75.9 | 73.2 - 78.6 |
| COLLEGE 1–3 YRS | 24.3 | 21.6 - 27.1 | 77.4 | 74.8 - 80.0 | 51.1 | 47.8 - 54.3 | 27.2 | 24.5 - 30.0 | 77.4 | 74.8 - 80.0 |
| COLLEGE 4+ YRS | 15.3 | 13.3 - 17.2 | 83.6 | 81.4 - 85.9 | 58.1 | 55.5 - 60.7 | 33.6 | 31.3 - 36.0 | 83.6 | 81.4 - 85.9 |
| HOUSEHOLD INCOME | | | | | | | | | | |
| <$25,000 | 27.6 | 24.5 - 30.6 | 71.1 | 68.0 - 74.2 | 41.6 | 38.1 - 45.1 | 21.4 | 18.6 - 24.1 | 71.1 | 68.0 - 74.2 |
| $25,000–34,999 | 21.5 | 17.5 - 25.5 | 69.9 | 65.1 - 74.8 | 54.7 | 49.5 - 59.9 | 25.4 | 20.9 - 29.9 | 69.9 | 65.1 - 74.8 |
| $35,000–49,999 | 18.8 | 15.7 - 21.9 | 79.7 | 75.9 - 83.5 | 55.0 | 50.8 - 59.2 | 27.0 | 23.1 - 30.9 | 79.7 | 75.9 - 83.5 |
| $50,000–74,999 | 20.9 | 17.3 - 24.5 | 80.7 | 77.0 - 84.3 | 56.0 | 51.6 - 60.4 | 26.3 | 23.0 - 29.6 | 80.7 | 77.0 - 84.3 |
| $75,000+ | 20.3 | 17.6 - 23.0 | 83.0 | 80.5 - 85.4 | 59.7 | 56.5 - 62.9 | 34.3 | 31.2 - 37.3 | 83.0 | 80.5 - 85.4 |
| REGION | | | | | | | | | | |
| I–WESTERN | 23.3 | 19.9 - 26.6 | 73.3 | 70.0 - 76.7 | 56.2 | 52.3 - 60.1 | 28.6 | 25.1 - 32.0 | 73.3 | 70.0 - 76.7 |
| II–CENTRAL | 21.9 | 18.6 - 25.2 | 76.4 | 73.2 - 79.6 | 50.8 | 46.8 - 54.8 | 28.9 | 25.3 - 32.4 | 76.4 | 73.2 - 79.6 |
| III–NORTH EAST | 19.1 | 16.4 - 21.7 | 78.0 | 75.1 - 80.9 | 51.2 | 47.5 - 54.8 | 26.2 | 23.2 - 29.1 | 78.0 | 75.1 - 80.9 |
| IV–METRO WEST | 16.4 | 13.8 - 19.1 | 82.6 | 79.3 - 85.8 | 54.9 | 51.1 - 58.6 | 33.1 | 29.6 - 36.7 | 82.6 | 79.3 - 85.8 |
| V–SOUTH EAST | 24.0 | 20.9 - 27.1 | 80.5 | 77.6 - 83.4 | 52.1 | 48.4 - 55.7 | 25.9 | 22.9 - 28.8 | 80.5 | 77.6 - 83.4 |
| VI–BOSTON | 21.8 | 18.5 - 25.1 | 74.7 | 71.1 - 78.3 | 48.7 | 44.5 - 53.0 | 26.8 | 23.3 - 30.2 | 74.7 | 71.1 - 78.3 |

## AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

| MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2005 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HIGH CHOLESTEROL | | HIGH BLOOD PRESSURE | | MEDICINE FOR HIGH BP | | DIABETES | | CURRENT ASTHMA | |
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| OVERALL | 33.0 | 31.3 - 34.6 | 24.6 | 23.5 - 25.8 | 57.6 | 53.7 - 61.6 | 6.2 | 5.6 - 6.8 | 9.7 | 8.8 - 10.6 |
| GENDER | | | | | | | | | | |
| MALE | 34.9 | 32.3 - 37.4 | 25.3 | 23.6 - 27.1 | 56.0 | 51.1 - 61.0 | 6.9 | 5.9 - 7.9 | 6.8 | 5.6 - 8.0 |
| FEMALE | 31.0 | 28.9 - 33.1 | 23.7 | 22.3 - 25.1 | 60.1 | 53.9 - 66.2 | 5.5 | 4.8 - 6.3 | 12.5 | 11.1 - 13.8 |
| RACE-ETHNICITY* | | | | | | | | | | |
| WHITE | 31.7 | 30.1 - 33.3 | 24.1 | 22.9 - 25.3 | 57.7 | 53.1 - 62.3 | 5.4 | 4.8 - 6.0 | 9.9 | 8.9 - 11.0 |
| BLACK | 32.8 | 26.1 - 39.6 | 36.7 | 30.8 - 42.6 | 64.7 | 51.5 - 78.0 | 14.0 | 9.2 - 18.9 | 9.1 | 5.7 - 12.5 |
| HISPANIC | 44.7 | 37.8 - 51.7 | 28.3 | 24.2 - 32.5 | 54.8 | 45.1 - 64.4 | 11.4 | 8.5 - 14.3 | 10.3 | 7.5 - 13.2 |
| ASIAN | 30.0 | 18.2 - 41.8 | † | - | 57.0 | 44.1 - 69.9 | † | - | † | - |
| EDUCATION | | | | | | | | | | |
| < HIGH SCHOOL | 44.3 | 36.5 - 52.0 | 29.8 | 25.9 - 33.7 | 68.6 | 59.8 - 77.5 | 10.5 | 8.0 - 13.0 | 12.9 | 9.6 - 16.2 |
| HIGH SCHOOL | 33.5 | 30.2 - 36.7 | 27.1 | 24.8 - 29.5 | 54.3 | 47.8 - 60.7 | 7.2 | 5.8 - 8.5 | 9.6 | 7.8 - 11.3 |
| COLLEGE 1–3 YRS | 33.3 | 30.3 - 36.4 | 26.6 | 24.0 - 29.1 | 61.0 | 53.9 - 68.1 | 7.5 | 6.1 - 9.0 | 10.5 | 8.7 - 12.4 |
| COLLEGE 4+ YRS | 32.1 | 29.4 - 34.9 | 21.7 | 19.8 - 23.6 | 54.4 | 47.9 - 60.9 | 4.1 | 3.4 - 4.8 | 7.8 | 6.7 - 8.8 |
| HOUSEHOLD INCOME | | | | | | | | | | |
| <$25,000 | 37.3 | 33.5 - 41.1 | 29.7 | 26.9 - 32.4 | 59.8 | 51.4 - 68.2 | 11.4 | 9.4 - 13.5 | 15.1 | 12.5 - 17.7 |
| $25,000–34,999 | 34.7 | 27.9 - 41.4 | 25.4 | 21.8 - 29.0 | 64.2 | 51.7 - 76.8 | 6.5 | 4.4 - 8.6 | 9.2 | 6.5 - 11.9 |
| $35,000–49,999 | 32.9 | 29.1 - 36.6 | 23.3 | 20.5 - 26.0 | 50.2 | 42.2 - 58.2 | 5.2 | 3.8 - 6.7 | 10.4 | 8.0 - 12.8 |
| $50,000–74,999 | 37.6 | 31.7 - 43.6 | 25.9 | 21.9 - 29.9 | 60.8 | 51.6 - 69.9 | 5.5 | 3.9 - 7.1 | 7.3 | 5.1 - 9.5 |
| $75,000+ | 32.6 | 29.4 - 35.8 | 24.1 | 21.6 - 26.6 | 54.2 | 48.0 - 60.4 | 4.1 | 2.9 - 5.3 | 7.9 | 6.5 - 9.3 |
| REGION | | | | | | | | | | |
| I–WESTERN | 31.8 | 27.0 - 36.6 | 25.5 | 22.5 - 28.5 | 62.7 | 53.1 - 72.3 | 6.4 | 5.1 - 7.8 | 11.0 | 8.6 - 13.4 |
| II–CENTRAL | 34.1 | 29.9 - 38.3 | 26.8 | 23.5 - 30.0 | 62.9 | 53.1 - 72.8 | 7.7 | 5.6 - 9.9 | 11.9 | 9.2 - 14.7 |
| III–NORTH EAST | 30.9 | 27.9 - 33.9 | 21.2 | 18.9 - 23.5 | 55.3 | 46.4 - 64.2 | 5.7 | 4.5 - 6.8 | 7.8 | 6.2 - 9.5 |
| IV–METRO WEST | 37.1 | 32.8 - 41.3 | 23.8 | 21.0 - 26.5 | 50.5 | 43.8 - 57.1 | 5.0 | 3.8 - 6.2 | 8.3 | 6.2 - 10.4 |
| V–SOUTH EAST | 32.1 | 29.0 - 35.1 | 26.9 | 24.4 - 29.4 | 56.5 | 48.4 - 64.7 | 6.2 | 4.9 - 7.4 | 10.8 | 8.7 - 12.9 |
| VI–BOSTON | 29.4 | 25.7 - 33.1 | 24.9 | 21.9 - 28.0 | 55.8 | 47.7 - 63.8 | 6.9 | 5.1 - 8.7 | 9.0 | 6.9 - 11.1 |

## AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

| MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2005 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EVER HAD ASTHMA | | ARTHRITIS | | ARTHRITIS LIMITATIONS | | DISABILITY | | DISABLED AND NEED HELP | |
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| OVERALL | 14.3 | 13.2 - 15.3 | 25.4 | 24.3 - 26.4 | 9.1 | 8.4 - 9.8 | 19.1 | 17.2 - 20.9 | 6.6 | 5.4 - 7.8 |
| GENDER | | | | | | | | | | |
| MALE | 11.3 | 9.8 - 12.8 | 21.1 | 19.5 - 22.6 | 6.7 | 5.8 - 7.6 | 18.1 | 15.3 - 20.9 | 3.8 | 2.6 - 5.0 |
| FEMALE | 17.0 | 15.5 - 18.5 | 29.2 | 27.7 - 30.7 | 11.5 | 10.3 - 12.6 | 20.1 | 17.7 - 22.6 | 9.1 | 7.1 - 11.1 |
| RACE-ETHNICITY* | | | | | | | | | | |
| WHITE | 14.6 | 13.4 - 15.9 | 25.8 | 24.6 - 27.0 | 9.0 | 8.2 - 9.8 | 19.2 | 17.0 - 21.3 | 6.4 | 4.9 - 7.8 |
| BLACK | 13.5 | 9.2 - 17.8 | 23.7 | 17.8 - 29.6 | 8.5 | 5.2 - 11.7 | 17.2 | 9.4 - 24.9 | 4.0 | 0.0 - 8.0 |
| HISPANIC | 16.1 | 12.7 - 19.4 | 23.1 | 18.9 - 27.3 | 11.2 | 8.1 - 14.2 | 23.6 | 16.7 - 30.5 | 13.1 | 7.6 - 18.6 |
| ASIAN | † | - | † | - | † | - | † | - | † | - |
| EDUCATION | | | | | | | | | | |
| < HIGH SCHOOL | 18.3 | 14.6 - 21.9 | 27.8 | 23.8 - 31.7 | 13.4 | 10.3 - 16.4 | 32.2 | 25.1 - 39.3 | 16.6 | 10.6 - 22.7 |
| HIGH SCHOOL | 14.3 | 12.2 - 16.5 | 28.5 | 26.3 - 30.8 | 10.1 | 8.5 - 11.7 | 19.0 | 15.3 - 22.7 | 7.4 | 4.4 - 10.3 |
| COLLEGE 1–3 YRS | 14.9 | 12.7 - 17.1 | 27.5 | 25.0 - 29.9 | 10.0 | 8.4 - 11.6 | 21.9 | 18.1 - 25.7 | 7.8 | 5.8 - 9.8 |
| COLLEGE 4+ YRS | 12.4 | 10.8 - 14.1 | 22.7 | 21.0 - 24.4 | 8.3 | 6.9 - 9.6 | 16.1 | 13.0 - 19.3 | 3.4 | 2.3 - 4.5 |
| HOUSEHOLD INCOME | | | | | | | | | | |
| <$25,000 | 19.6 | 16.8 - 22.5 | 33.1 | 30.2 - 36.0 | 17.3 | 14.7 - 19.8 | 34.9 | 30.0 - 39.7 | 15.9 | 11.8 - 20.0 |
| $25,000–34,999 | 12.5 | 9.4 - 15.5 | 27.1 | 23.5 - 30.6 | 11.9 | 9.0 - 14.7 | 25.7 | 19.1 - 32.2 | 9.6 | 4.5 - 14.6 |
| $35,000–49,999 | 14.6 | 11.7 - 17.5 | 26.8 | 23.7 - 30.0 | 9.2 | 7.1 - 11.3 | 18.1 | 13.3 - 22.9 | 5.1 | 2.5 - 7.7 |
| $50,000–74,999 | 11.5 | 8.9 - 14.1 | 25.7 | 22.8 - 28.7 | 8.0 | 5.8 - 10.2 | 17.1 | 10.5 - 23.7 | 3.5 | 1.5 - 5.5 |
| $75,000+ | 13.1 | 11.1 - 15.2 | 22.3 | 19.9 - 24.8 | 6.3 | 4.7 - 7.9 | 13.8 | 9.9 - 17.7 | 1.9 | 1.0 - 2.7 |
| REGION | | | | | | | | | | |
| I–WESTERN | 16.6 | 13.7 - 19.4 | 28.0 | 25.1 - 30.9 | 11.1 | 9.1 - 13.2 | 21.2 | 16.4 - 26.1 | 7.5 | 4.7 - 10.3 |
| II–CENTRAL | 16.2 | 13.2 - 19.2 | 29.8 | 26.7 - 32.9 | 11.5 | 9.0 - 14.0 | 21.7 | 17.1 - 26.3 | 8.6 | 5.3 - 11.9 |
| III–NORTH EAST | 13.4 | 11.2 - 15.6 | 25.2 | 22.7 - 27.8 | 7.5 | 6.1 - 8.8 | 16.9 | 13.0 - 20.7 | 5.0 | 3.0 - 6.9 |
| IV–METRO WEST | 13.2 | 10.5 - 15.8 | 21.7 | 19.4 - 24.1 | 7.0 | 5.3 - 8.6 | 14.7 | 11.2 - 18.3 | 4.8 | 2.3 - 7.2 |
| V–SOUTH EAST | 13.9 | 11.5 - 16.2 | 27.0 | 24.7 - 29.2 | 10.0 | 8.4 - 11.6 | 22.8 | 18.1 - 27.5 | 8.5 | 5.1 - 12.0 |
| VI–BOSTON | 13.1 | 10.5 - 15.6 | 19.8 | 16.9 - 22.7 | 8.6 | 6.6 - 10.5 | 18.2 | 13.6 - 22.9 | 5.4 | 3.0 - 7.7 |

# AGE- ADJUSTED PERCENTAGES FOR SELECTED TOPICS (CONTINUED)

| MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE | | | | |
|---|---|---|---|---|
| | EVER USED ILLICIT DRUGS | | DRUGS PAST 30 DAYS | |
| | % | 95% CI | % | 95% CI |
| OVERALL | 51.5 | 48.6 - 54.4 | 7.2 | 5.6 - 8.9 |
| GENDER | | | | |
| MALE | 55.2 | 51.1 - 59.3 | 8.7 | 6.1 - 11.3 |
| FEMALE | 47.4 | 43.7 - 51.2 | 5.7 | 3.7 - 7.6 |
| RACE-ETHNICITY* | | | | |
| WHITE | 56.2 | 53.1 - 59.4 | 8.1 | 6.0 - 10.2 |
| BLACK | 38.4 | 28.7 - 48.1 | 5.0 | 0.5 - 9.5 |
| HISPANIC | 26.3 | 18.9 - 33.6 | 2.4 | 0.6 - 4.2 |
| ASIAN | † | - | † | - |
| EDUCATION | | | | |
| < HIGH SCHOOL | 34.5 | 26.8 - 42.2 | 8.4 | 3.5 - 13.3 |
| HIGH SCHOOL | 49.3 | 43.6 - 55.0 | 9.0 | 5.4 - 12.7 |
| COLLEGE 1–3 YRS | 57.9 | 51.0 - 64.7 | 6.9 | 3.9 - 9.9 |
| COLLEGE 4+ YRS | 52.4 | 48.1 - 56.8 | 5.9 | 3.0 - 8.8 |
| HOUSEHOLD INCOME | | | | |
| <$25,000 | 51.2 | 43.8 - 58.6 | 9.3 | 5.2 - 13.3 |
| $25,000–34,999 | 52.6 | 45.6 - 59.5 | 7.5 | 2.3 - 12.8 |
| $35,000–49,999 | 46.1 | 38.6 - 53.7 | 8.5 | 4.4 - 12.6 |
| $50,000–74,999 | 59.5 | 47.5 - 71.4 | 10.0 | 4.1 - 15.9 |
| $75,000+ | 50.8 | 46.2 - 55.5 | 5.4 | 1.9 - 9.0 |
| REGION | | | | |
| I–WESTERN | 52.1 | 45.4 - 58.9 | 11.2 | 6.5 - 15.9 |
| II–CENTRAL | 49.9 | 44.0 - 55.8 | 6.7 | 2.5 - 10.9 |
| III–NORTH EAST | 50.4 | 44.3 - 56.5 | 5.9 | 3.2 - 8.6 |
| IV–METRO WEST | 54.1 | 46.1 - 62.1 | 7.4 | 3.4 - 11.4 |
| V–SOUTH EAST | 53.3 | 47.8 - 58.9 | 6.4 | 2.8 - 10.0 |
| VI–BOSTON | 42.3 | 35.9 - 48.7 | 4.2 | 1.8 - 6.5 |

* White, Black, and Asian race categories refer to non-Hispanic; † Insufficient data

# MASSACHUSETTS ESTIMATES, NATIONAL ESTIMATES, AND HP 2010^

| MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2005 | | | | |
|---|---|---|---|---|
| VARIABLES | MA % | US MEDIAN¶ % | US RANGE¶ % | HP 2010^ % |
| OVERALL HEALTH MEASURES | | | | |
| FAIR OR POOR HEALTH | 13.2 | 14.9 | 11.1-34.1 | X |
| 15+ POOR MENTAL HEALTH DAYS | 8.8 | 8.9 | 6.6-14.4 | X |
| 15+ DAYS SAD, BLUE OR DEPRESSED | 7.7 | | | X |
| 15+ DAYS IN POOR PHYSICAL HEALTH | 9.3 | 9.6 | 5.5-15.6 | X |
| HEALTH CARE ACCESS AND UTILIZATION | | | | |
| NO HEALTH INSURANCE | 11.8** | 17.1 | | 0.0 |
| HAVE PERSONAL HEALTH CARE PROVIDER | 87.1 | 80.9 | 68.0-89.3 | 85.0 |
| COULD NOT SEE DOCTOR DUE TO COST | 8.8 | 13.3 | 6.2-19.1 | X |
| RISK FACTORS AND PREVENTIVE BEHAVIORS | | | | |
| CURRENT SMOKER | 18.1 | 20.5 | 8.1-28.7 | 12.0 |
| HEAVY SMOKER | 2.0 | | | X |
| QUIT ATTEMPT AMONG CURRENT SMOKERS | 56.4 | 55.4 | 49.5-64.7 | 75.0 |
| PLAN TO QUIT AMONG CURRENT SMOKERS | 32.7 | | | X |
| LIVE IN HOUSEHOLD WHERE SMOKING IS NOT ALLOWED | 78.2 | | | X |
| EXPOSED TO ENVIRONMENTAL SMOKE | 44.7 | | | X |
| BINGE DRINKING | 15.7 | 14.4 | 8.3-22.1 | 6.0 |
| HEAVY DRINKING | 6.3 | 4.9 | 2.7-7.5 | X |
| OVERWEIGHT (BASED ON HP 2010) | 56.1 | 61.5 | 53.0-67.3 | X |
| OBESITY | 20.7 | 24.4 | 17.8-30.9 | 15.0 |
| ANY LEISURE TIME PHYSICAL ACTIVITY | 76.7 | 76.1 | 51.0-83.8 | 70.0 |
| REGULAR PHYSICAL ACTIVITY | 52.6 | 48.7 | 32.6-59.2 | X |
| FRUITS AND VEGETABLES | 28.6 | 23.2 | 14.3-32.3 | X |
| CHOLESTEROL CHECKED IN PAST 5 YEARS | 79.3 | 73.0 | 62.8-81.0 | 80.0 |
| HIGH CHOLESTEROL | 35.7 | 35.6 | 30.3-39.9 | X |
| HIGH BLOOD PRESSURE | 25.3 | 25.8 | 18.7-33.8 | 16.0 |
| TAKE MEDICINE FOR HIGH BLOOD PRESSURE | 75.3 | 78.6 | 64.7-85.6 | X |
| FLU VACCINE IN PAST YEAR (50-64) | 31.0 | 27.8*** | 17.7-38.8 | X |
| FLU VACCINE IN PAST YEAR (65+) | 70.0 | 65.4*** | 32.0-77.8 | 90.0 |
| EVER HAD PNEUMONIA VACCINATION (65+) | 64.8 | 65.7 | 28.3-71.7 | 90.0 |
| CHRONIC HEALTH CONDITIONS | | | | |
| DIABETES | 6.4 | 7.4 | 4.4-12.7 | 2.5 |
| EVER HAD ASTHMA | 14.2 | 12.6 | 8.9-19.3 | X |
| CURRENTLY HAVE ASTHMA | 9.6 | 8.0 | 4.4-10.7 | X |
| HAVE ARTHRITIS | 25.9 | 26.9 | 16.6-34.9 | X |
| LIMITATIONS DUE TO ARTHRITIS | 9.3 | | | X |
| HEART DISEASE (35+) | 8.5 | | | X |
| STROKE (35+) | 3.0 | | | X |
| DISABILITY | 19.5 | | | X |
| DISABILITY / NEED HELP WITH ACTIVITIES | 6.7 | | | X |
| CANCER SCREENING | | | | |
| BLOOD STOOL TEST IN THE PAST 2 YRS (50+) | 30.0 | | | 50.0 |
| SIGMOIDOSCOPY OR COLONOSCOPY PAST 5 YRS (50+) | 58.8 | | | X |
| MAMMOGRAPHY IN PAST 2 YEARS | 84.1 | | | X |
| OTHER TOPICS | | | | |
| EVER TESTED FOR HIV (18-64) | 41.4 | 38.6 | 25.0-62.9 | X |
| TESTED FOR HIV IN PAST YEAR (18-64) | 9.4 | 9.8 | 5.7-29.6 | X |
| EVER USED ILLICIT DRUGS | 57.3 | | | X |
| USED ILLICIT DRUGS IN PAST 30 DAYS | 8.1 | | | 2.0 |
| SEXUAL VIOLENCE (WOMEN) | 16.9 | | | X |
| INTIMATE PARTNER VIOLENCE (WOMEN) | 22.4 | | | X |

¶ The US median percentage and range are based on data for all 50 states, District of Columbia, and Puerto Rico.
^ HP2010 = Health People 2010 Objectives.
X No applicable objective.
** This estimate of the uninsured is based on the insurance question asked by all states. Additional Massachusetts information has been left out of this calculation so that Massachusetts can be compared with other states. Please see page 22.
*** flu shot only, nasal spray not included

# SUMMARY OF ITEM-SPECIFIC NON-RESPONSE

| MASSACHUSETTS BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2005 | |
|---|---|
| | PERCENTAGE OF NON-RESPONSE* % |
| OVERALL HEALTH MEASURES | |
| FAIR OR POOR HEALTH | 0.6 |
| 15+ POOR MENTAL HEALTH DAYS | 1.6 |
| 15+ DAYS SAD, BLUE OR DEPRESSED | 10.0 |
| 15+ DAYS IN POOR PHYSICAL HEALTH | 1.9 |
| HEALTH CARE ACCESS AND UTILIZATION | |
| NO HEALTH INSURANCE | 0.2 |
| HAVE PERSONAL HEALTH CARE PROVIDER | 0.3 |
| COULD NOT SEE DOCTOR DUE TO COST | 0.2 |
| RISK FACTORS AND PREVENTIVE BEHAVIORS | |
| CURRENT SMOKER | 0.6 |
| HEAVY SMOKER | 2.2 |
| QUIT ATTEMPT AMONG CURRENT SMOKERS | 0.4 |
| PLAN TO QUIT AMONG CURRENT SMOKERS | 14.4 |
| LIVE IN HOUSEHOLD WHERE SMOKING IS NOT ALLOWED | 8.4 |
| EXPOSED TO ENVIRONMENTAL SMOKE | 10.2 |
| BINGE DRINKING | 1.2 |
| HEAVY DRINKING | 2.1 |
| OVERWEIGHT (BASED ON HP 2010) | 6.7 |
| OBESITY | 6.7 |
| ANY LEISURE TIME PHYSICAL ACTIVITY | 0.1 |
| REGULAR PHYSICAL ACTIVITY | 9.1 |
| FRUITS AND VEGETABLES | 3.6 |
| CHOLESTEROL CHECKED IN PAST 5 YEARS | 15.2 |
| HIGH CHOLESTEROL | 2.6 |
| HIGH BLOOD PRESSURE | 2.4 |
| TAKE MEDICINE FOR HIGH BLOOD PRESSURE | 0.3 |
| FLU VACCINE IN PAST YEAR (50+) | 0.3 |
| EVER HAD PNEUMONIA VACCINATION (65+) | 9.6 |
| CHRONIC HEALTH CONDITIONS | |
| DIABETES | 0.2 |
| EVER HAD ASTHMA | 0.2 |
| CURRENTLY HAVE ASTHMA | 0.6 |
| HAVE ARTHRITIS | 3.1 |
| LIMITATIONS DUE TO ARTHRITIS | 3.2 |
| HEART DISEASE (35+) | 0.9 |
| STROKE (35+) | 0.2 |
| DISABILITY | 13.5 |
| DISABILITY / NEED HELP WITH ACTIVITIES | 13.5 |
| CANCER SCREENING | |
| BLOOD STOOL TEST IN THE PAST 2 YRS (50+) | 10.5 |
| SIGMOIDOSCOPY OR COLONOSCOPY PAST 5 YRS (50+) | 10.2 |
| MAMMOGRAPHY IN PAST 2 YEARS | 8.8 |
| OTHER TOPICS | |
| EVER TESTED FOR HIV (18-64) | 8.2 |
| TESTED FOR HIV IN PAST YEAR (18-64) | 15.1 |
| EVER USED ILLICIT DRUGS | 20.3 |
| USED ILLICIT DRUGS IN PAST 30 DAYS | 21.0 |
| SEXUAL VIOLENCE | 28.4 |
| INTIMATE PARTNER VIOLENCE | 28.0 |

***** The item-specific unweighted non-response % was calculated using the number of respondents who had finished the demographic section of the 2005 BRFSS as the denominator and those who reported don't know or refused as the numerators.